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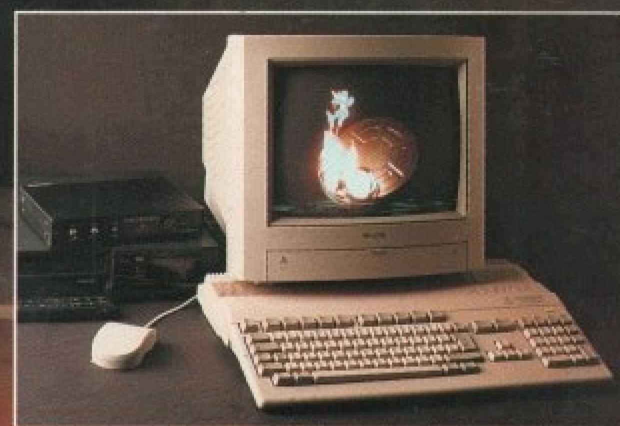




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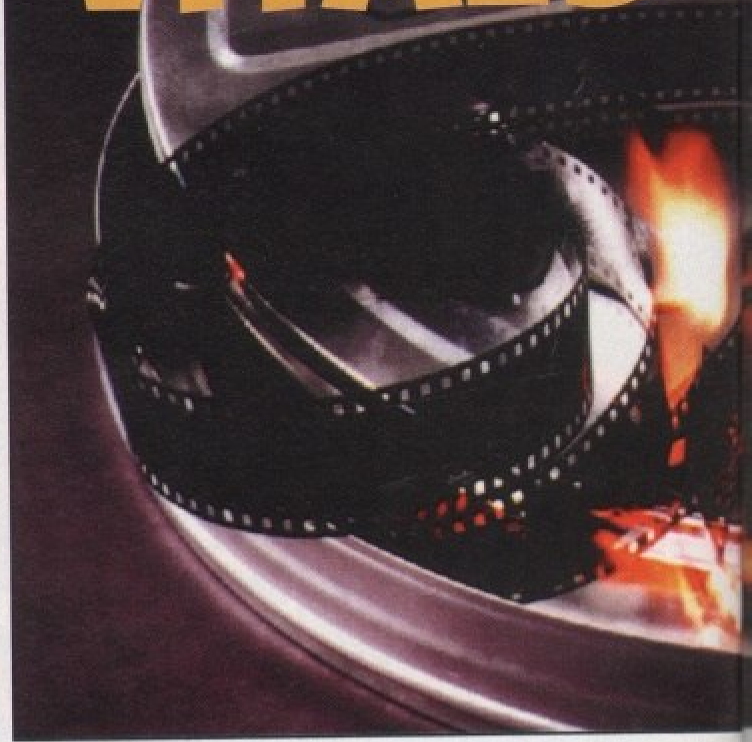
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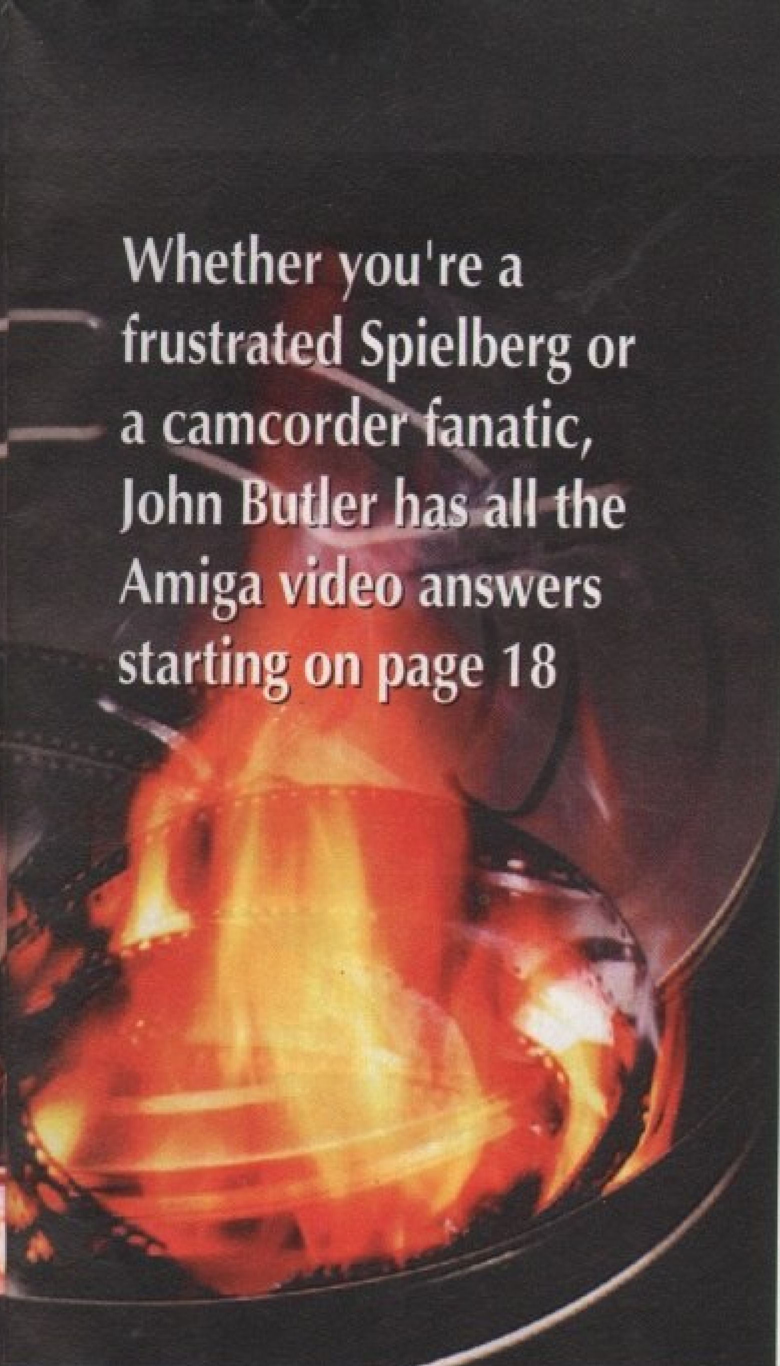
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VIDEO VITALS



amiga almanac

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Whether you're a frustrated Spielberg or a camcorder fanatic, John Butler has all the Amiga video answers starting on page 18



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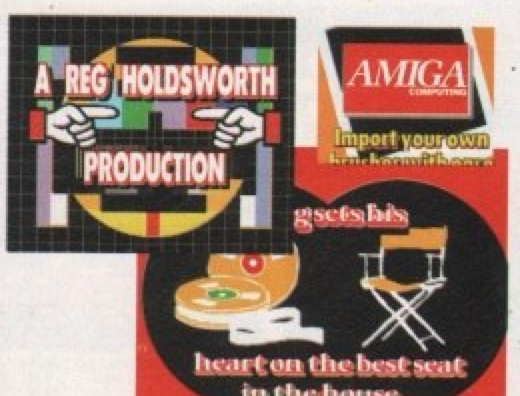
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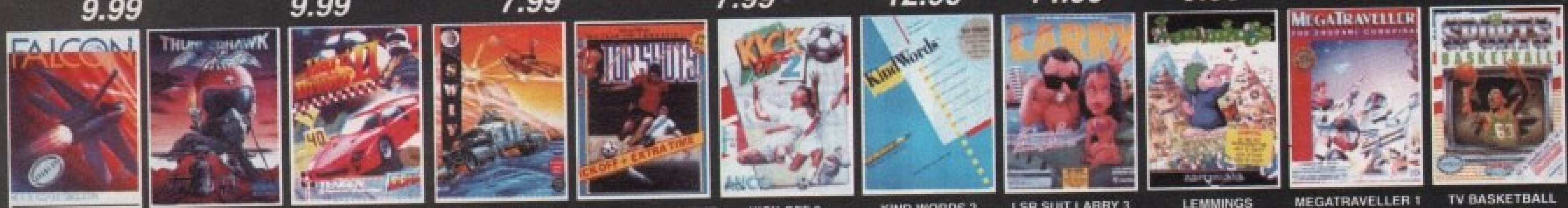
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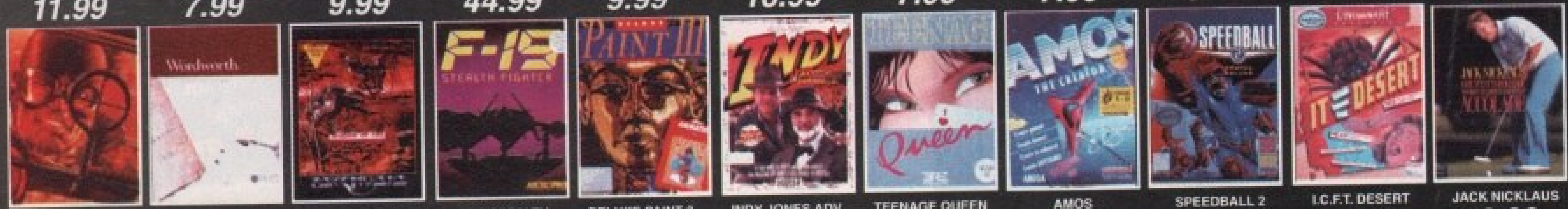
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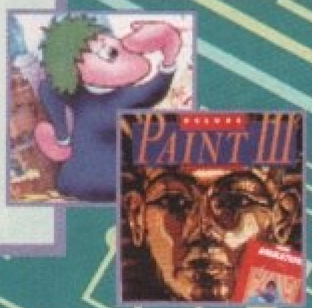


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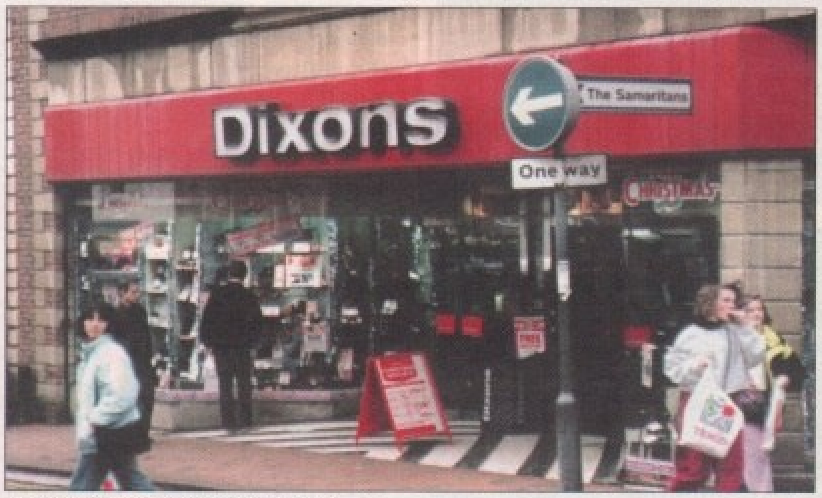
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AMIGA COMPUTING NEWSLINE

A500P stays at £369

By John Butters



Price war is leading to cheaper Amigas

PEOPLE buying Amigas are benefiting from a price war which is showing no sign of ending.

Most electrical chains say they will continue selling the Cartoon Classics bundle at Christmas prices – mainly £369.

High Street giants have generally sold Amigas at the manufacturer's recommended retail price of £399, but in a recession-beating move price tags were cut in the run up to Christmas.

Experts believe that small, independent dealers trying to compete with the chains are to thank for cheaper Amigas. At least one store advertises a policy of matching local pricing, and to be competitive others are forced to follow.

"Basically we're seeing a price war," said a Rumbelows official. "If anything, prices will drop even further, perhaps to £330," he predicted.

Commodore spokesman Andrew Ball said: "We have an RRP of £399 but that's not mandatory.

"At the end of the day the High Street will sell at the price they want to – it's relatively out of our hands. They're selling a lot of Amigas and that makes us happy," he added.

But the firm's sales director Kelly Sumner recently predicted that High Street Cartoon Classics prices will return to £399.

He said that people buying computers at this time of year are committed buyers and are not swayed by the odd £20 or £30 discounting.

Meanwhile, there has been speculation in trade newspaper *Computer Trade Weekly* that once Commodore release their sub-£300 A300 they could repackage the A500P to take the emphasis away from games as consoles steal the market.

CD to grow with drive

THE imminent release of the Amiga CD-ROM drive, now called the A570, is encouraging major software houses to back Commodore's CDTV technology by releasing dual format Amiga software.

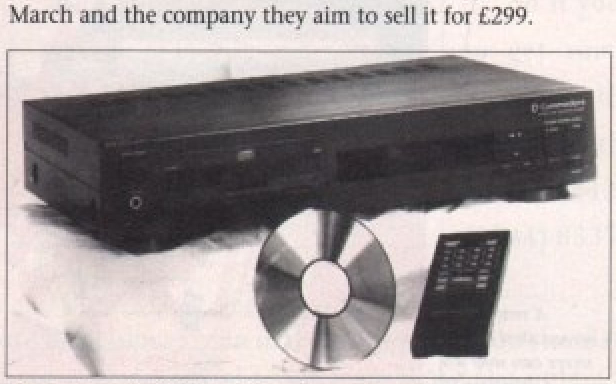
"We expect the introduction of the Amiga CD-ROM drive to create a user base of 100,000 in a very short period, creating a market for CDTV that publishers cannot afford to ignore," said Commodore's Andrew Ball.

"We already have backing from major software houses and we expect others to follow suit."

One such firm is Psygnosis, publisher of last year's leisure hit Lemmings. Boss Jonathan Ellis explained that using the same technology to develop for both the Amiga and CDTV is a cost-effective method of producing software for two formats.

"We will be releasing some of our major titles on CDTV this year," he added.

Commodore are rumoured to be launching the drive in March and the company they aim to sell it for £299.


More support for CDTV as drive release approaches

68020 to be new standard?

RUMOURS from the United States suggest that Commodore plan to standardise on the 68020 processor chip for all mid-range Amigas during the next couple of years.

Because there will be a new entry-level machine – the A300 – it is unknown whether the A500P would be included in such a move.

However, the first machine to have the chip will be the A800 Classic, uncovered for the first time in January 1992's issue of *Amiga Computing*.

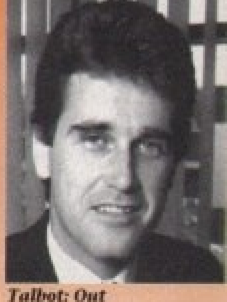
Maidenhead loses staff

RECESSION has led to Commodore axing ten jobs at their Maidenhead-based headquarters, despite the computer giant expecting turnover to increase by 40 per cent this year to £100 million.

Many departments have been affected by the redundancies, including warehousing, marketing, sales and administration.

The company say the cost-cutting move is simply good management as the length of the recession exceeds Government predictions.

Commodore have also lost their national business development manager for government and education. Peter Talbot has quit the firm and joins rival Acorn.


Talbot: Out

Eight megs outside A500P

AN EXTERNAL memory expansion has been released for A500 and A500Ps by Ashcom Design and Developments (0483 740664) to give between two and eight megabytes of RAM.

Plugging into the computer, the AX series of upgrades has a through port for other external peripherals such as hard drives. Available with two, four or eight megabytes of memory they cost £169, £235 and £369 respectively.

Charity software from ASDG

AN AMERICAN developer of advanced colour image processing software and hardware have released an arcade-style game to benefit three American charities.

RingWar – an old-fashioned shoot-'em-up – will be distributed in a similar way to shareware. Available through bulletin boards and public domain libraries, the program was written by ASDG employee Eric Bazan.

The opening credits give the addresses for American Red Cross, American Cancer Society and Muscular Dystrophy Association, to which they ask a voluntary donation of $10 be sent.

Commented ASDG president Perry Kivolowitz: "Really, this should be called charityware instead of shareware."

Show to have Amiga area

AMIGA enthusiasts are to be given their own area at the Spring Computer Shopper Show where they will be able to seek advice and buy products.

The organiser is claiming that the Amiga Shopping Centre will offer one of the greatest selections of Amiga products ever seen under one roof.

"As the Amiga is now recognised as the number one home computer, we realised there was a need to create an area of this type," says Nav Mann, the event director.

To be organised by Blenheim PEL (081-742 2828), it will be held at Olympia, London on May 28 to 31.

FRED joins ADPro

ENHANCEMENTS including the addition of a frame editor have been made to ASDG's (010 1 608 273 6585) Art Department Professional.

The new visually-oriented frame editor, FRED, helps users arrange their pictures into lists called sequences. Individual frames in a sequence are represented onscreen with rendered icons.

Each frame in a sequence can be processed to provide an easy method of bath processing. FRED also gives the ability to call special purpose drivers to enable ADPro to generate animation effects automatically. Added to improve the package's use in video studios, are roll and broadcast limit operators.

The roll operator speeds up the creation of video transitions such as pushes, slides and reveals.

Eight new dithering methods have been added to the program's Prefprinter saver which prints pictures with 24-bit plane colour or 8-bit plane greyscale. Upgrades from earlier versions are available for between $90 and $145. In the UK call Silica Systems on 081-309 1111.



FRED: the latest addition to ADPro

Weather watch

BRITISH subscribers to the CompuServe (0800 289378) online information system can now access two new services – UK weather and historical equity pricing information.

Weather reports and satellite pictures showing conditions across Europe are updated frequently throughout the day. Provided by Accu-Weather, the information also includes three-day forecasts for 85 cities worldwide, 12 of them in Britain.

Pricing information for more than 5,000 equity issues and about 350 market indexes is available in the new UK Historical Pricing. Supplied by Extel Financial, updates are made daily.

Connecting to the service at 1,200 or 2,400 bits per second costs £7 per hour.

Opening up America

NORTH AMERICANS can now guarantee they receive *Amiga Computing* only days after it is published by taking a subscription through our new Canadian office.

To receive 12 copies of the world's best dedicated Amiga magazine and free monthly CoverDisk send $94 to Europress (North America), Unit 14, 225 Bysham Park Drive, Woodstock, Ontario NT4 1P1, Canada, or telephone (519) 539-0200.

Tablet gets Amiga driver

AN A3-size digitiser is now available for Amiga designers using computer-aided design and desktop publishing packages following the release of new drivers.

Compatible with all standard drawing packages, Cherry Electrical's Digitiser IV graphics tablet has been designed to sit on desks horizontally or at a working angle of five degrees.

Input is possible by cursor or by stylus, equipped with a rolling ball tip for freehand sketching.

Data transmission can be set at between 150 and 19,200 baud, with a maximum transfer rate of 100 co-ordinate pairs a second. Cursor and pen give 0.2mm and 0.5mm accuracy.

Precision work is possible by super resolution, selectable between 40 and 0.01 lines per millimetre, and it supports zooming features found in many packages.

Available for £450 from Tekdata (0782 577677).



A new driver means that Amiga users can now use Digitiser IV

Logical joystick additions

THE LOGIC 3 joystick range is to be joined by three new desktop models – Alpha Ray, Sigma Ray and Gamma Ray.

All contain microswitches but otherwise they are different, such as the Gamma Ray which has a digital timer display and countdown clock.

"There are now five joysticks in the Logic 3 range and we cover a broad spectrum of tastes," said company boss Ashvin Patel.

"The Sting Ray and Manta ray joysticks mean that we cover the hand-held market thoroughly and the three new sticks mean that Logic 3 can mix it with anyone on the desktop joystick front."

Prices range between £11.99 and £22.99.

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Cheap printer upgraded

SEIKOSHA have replaced their entry-level nine-pin dot matrix printer with an improved model which is targeted at home users, education and small business markets.

The SP1900 Plus has serif and sans serif fonts built in and there is a choice of typestyles and sizes.

Epson and IBM Proprinter II-compatible, it is capable of printing at 192 characters per second in fast mode, 160cps in draft and 40cps in letter quality.

"Nine pin sales still represent a large percentage of the dot matrix market," said Seikosha's sales manager Gareth Cornish.

"The SP1900 Plus is a key model in our entry-level range and users will be attracted by its superb value. It will have a substantial impact on the low-end printer market."

Available from Silica Systems (081-309 1111) it costs £155.



Improved dot matrix for just £155

Professional Page turns automatic

DESKTOP publishing package Professional Page has been upgraded to give it new features and enhancements to make its use easier, developer Gold Disk (010 1 416 602 4000) have announced.

More than 30 automatic functions called Genies have been added and users can create page layouts and designs by selecting Create Page From Genie.

Requesters enable layout type, page size, columns and margins to be selected, and features including line drawing and placement, address printing and text importing are also available. Professional Page 3 then generates a complete page based on the user's wishes.

Common operations such as envelope addressing, mail merge from a database and grid and table creation can be automated while drop and small caps and sub- and super-scripts can also be made automatic.

"Version 3 represents a major breakthrough in the evolution of desktop publishing," enthuses Gold Disk boss Kailash Ambwani.

"Most of the routine tasks associated with page layout are now completely automatic, freeing the designer to concentrate on the creative aspects of his work."

Needing at least two megabytes of memory and a hard disk drive, the program costs $295. In the UK call HB Marketing on 0753 686000, who did not have British pricing available at the time of *Amiga Computing* going to press.

Video card first from link

THE FIRST product to be produced under a new link between Californian Centaur Development and Australia-based Opal Technology is an Amiga 24-bit video display and effects card.

Internal or external versions of OpalVision are available and both provide true 24-bit broadcast quality video capabilities for all Amigas.

With 1.5 megabytes of display memory and an on-board graphics processor, it can be expanded through additional hardware modules.

These include a combination 256-level alpha channel genlock and frame grabber and a de-interlacer. Inputs and outputs are given in RGB and SVHS composite formats with real time special effects such as white balance, contrast and gamma correction, solarisation, negative and colourisation effects.

Opalvision can be operated in multiple resolutions, auto-configures to PAL or NTSC and can make 24-bit double-buffered animations.

Software bundled with OpalVision consists of OpalPaint, a full-featured, real time, 24-bit painting and image processing program, a variety of utility software and the first 24-bit game.

It will be available from the end of May for $995. Centaur Software can be contacted on 010 1 310 542 2226.

Dial-a-game from Deltronics

GAMES players nationwide can now get hold of the latest releases within a day of placing their telephone order with a South London-based company.

Customers have their name and address taken over the phone and only pay for the software once it has arrived at the door. All 16-bit formats including the Amiga are supported and prices are claimed to be slightly below recommended retail.

Deltronics can be called on 081-769 9568 and they have opened a shop at 215 Amesbury Avenue, Streatham, London SW16.

Changing names

MARSTEK, manufacturers of Amiga scanners, have recently changed their name to Mustek. The company continues to operate from 494 Midsummer Boulevard, Central Milton Keynes MK9 2EA.

Do you know something we don't?

Although *Amiga Computing* has scores of contacts in the Amiga world, we need you. If you have some hot news ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966. All information supplied will be treated in the strictest of confidence.

DIARY DATES

7 to 10 April 1992
Which Computer? Show
Organiser: Reed
(081-948 9800)
National Exhibition Centre, Birmingham
One of the country's top shows, but heavily biased towards the PC.

12 to 14 April 1992
European Computer Trade Show
Organiser: Blenheim Online
(081-742 2828)
Venue: Business Design Centre, London
A trade-only show where many of the year's releases can be previewed.

28 to 31 May 1992
Spring Computer Shopper Show
Organiser: Blenheim PEL
(081-742 2828)
Venue: Olympia, London
An area called Amiga Shopping Centre will be devoted to the machine.

10 to 12 July 1992
6th International 16-bit Computer Show
(081-549 3444)
Venue: Wembley Exhibition Halls, London
The second show of the year, for an event that's getting more and more support from the industry.

6 to 8 September 1992
European Computer Trade Show Autumn
Business Design Centre
Royal Agricultural Hall, London
A new trade-only event for the computer leisure industry.

OVERSEAS

11 to 18 March 1992
CeBit
Organiser: Deutsche Messe AG
(010 49 511 890)
Venue: Hannover Messegelaende, Germany
Always a launching ground for new hardware.

3 to 5 April 1992
Amiga Berlin
Organiser: AMI Shows Europe
(010 49 8092 24086)
Venue: AMK Berlin
The first German Amiga show of the year. Two giant halls will be packed with the latest products.

28 to 31 May 1992
Consumer Electronics Show
Organiser: EIG/CEG
Venue: Chicago
The show opens for the first time for the public on May 30, 1992.

● If your company is organising a show relevant to the Amiga and it's not listed, let us know so we can include the information in the diary.



By Denny Atkin

Commodore price boost

A MILD winter has resulted in Spring fever hitting a little early here in the States, and the results are really showing at Commodore's headquarters in West Chester, Pennsylvania.

While other computer manufacturers are cutting prices and upgrading hardware in an effort to boost stagnant sales during these recessionary times, the Spring-fever-dizzy Commodore US marketing group have decided to take the opposite approach.

They've boosted the price of the single-floppy Amiga 2000 to over $2000, more than double its holiday pricing of $999. And while Apple have announced that, come April, all Macs will have at least a 68030 chip, Commodore US refuse to even bring the slightly enhanced Amiga 500 Plus to American shores.

Meanwhile, the company continues to roll out CDTV a city at a time, and it's said that far fewer than 10,000 CDTV units have been sold across the United States. Unless Commodore seriously rethink their marketing strategy, the Amiga may lose what little foothold it has in the US.

Power hungry

IF YOU have added Commodore's A2630 25MHz 68030 expander to your Amiga 1500 or 2000 and still feel you don't have enough power, DKB Software are ready to help.

The company's new 2632 board plugs into the unused expansion slot on the A2630 and enables up to 112 megabytes of 32-bit memory to be added.

The board comes with 4Mb and can accept industry-standard 32-bit SIMM modules for further expansion. The board retails for $699.95 from DKB Software, 50240 W. Pontiac Tr., Wixom, MI 48393 USA; (313) 960-8750.

Black Belt goes soft



JUST as Digital Creations were expanding their market by shipping their first DCTV units to Europe, rival Black Belt Systems announced that they had discontinued production of their HAM-E graphics enhancer.

Black Belt's Ben Williams didn't give a reason for discontinuing the unit, saying that explaining his reasons would violate a non-disclosure agreement he'd signed with Commodore.

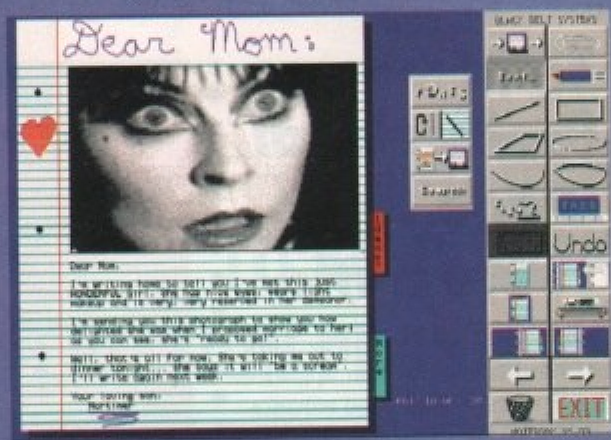
Speculation is that Black Belt discontinued the HAM-E, which Williams said was still a strong seller, in anticipation of new graphics developments from Commodore which would obsolete the unit.



With HAM-E now a memory, Black Belt has devoted itself purely to software development. The company's flagship software package, ImageMaster, was recently upgraded to support Terminator 2-style morphing.

Unlike DeluxePaint IV's morphing, ImageMaster's works in full 24-bit resolution, allowing truly impressive effects, such as smoothly changing a frog into a human face over a series of animation frames.

Morphing is just the newest effect in the ImageMaster package. The $199.95 package's other capabilities include image scaling, file format conversion, JPEG loading and saving, 24-bit touch-up painting, and dozens of special visual effects.



Black Belt recently released a new program that, once you have it, you'll wonder how you ever did without it. Notebook is just that – an onscreen notebook. Anything you would normally do with a desk-based notepad, you can do with NoteBook and you won't lose important pages.

The program supports multiple fonts and has a suite of structured drawing tools, so you can even doodle in the margins as you jot down your To Do list.

The program's features include a text highlighter, IFF graphics import, the ability to print single pages or a full notebook, and the ability to iconise the program on your Workbench.

The only caveat is that it runs in hi-res interlace, so you'll need a flicker-eliminator or a cool pair of sunglasses to work with it comfortably. Bargain priced at $39.95, the program is available from Black Belt, 398 Johnson Road, Glasgow, Montana, USA. Telephone: (406) 367-5513.

Better bridges

FROM Consultron come two great packages for Amiga users who need to run PC programs. The Ambassador is a software enhancement package for Commodore's Bridgeboard and Sidecar products.

The program allows Amiga floppy drives to be used as MS-DOS drives, and it lets you access data on MS-DOS hard drive partitions from the Amiga side.

Ambassador also includes a new driver that considerably speeds access to MS-DOS virtual partitions on Amiga hard drives. The program costs $79.95, plus $10.05 overseas shipping and handling.

Also new is CrossPC, a software-based PC-XT emulator that will be bundled with the coming CrossDOS 5.0 Plus update. CrossPC features CGA or mono graphics capability; serial, parallel, and mouse port emulation; and the ability to boot from an MS-DOS partition on an Amiga hard drive.

The updated CrossDOS 5.0 adds support for the reading 1.44Mb MS-DOS disks using the new high-density floppy drives Commodore is now shipping on Amiga 3000s and 3000Ts in the US, as well as improved support utilities and a new Workbench 2.0-style interface.

CrossDOS 5.0 Plus with CrossPC retails for $59.95 plus $10.05 overseas shipping and handling from Consultron, 11280 Parkview, Plymouth, MI 48170, USA; (313) 459-7271.

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Video





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When you buy an A500, you immediately have a basic videographic studio to play with and, with care and planning, impressive results can be achieved. Its capacity for expansion will ensure that you can develop and enhance your graphic system all the way up to broadcast standards.

The Mac and PC producers have lately begun to appreciate the potential of desktop video and their formidable resources will, no doubt, come to challenge the Amiga, especially at the high end of the market.

However, at the middle to entry levels of this market, I am confident that the Amiga will reign supreme for some years to come. In this article I intend to answer the questions – why, which, what and how?

Firstly, why is the Amiga family so well suited to work in the video field? Secondly, which video standards and formats are available to you? And thirdly, what is required to make the most of its capability at different levels?

Strengths

Finally, I'll offer a few tips on how to produce the most effective video work from your setup. These will hold true whether you're recording on a knackered VHS you bought down the boozer or slumming it in a plush digital editing suite.

The Amiga's video strengths are due to five main factors. These are, in no particular order, timing, output, custom chips, operating system, and last – but by no means least – the software and hardware available for it. These components combine to provide the power and interactivity so essential for work in video.

Timing, as anyone from Nigel Benn to Paul Daniels will tell you, is all important. The Amiga's original creators were wise enough to get its timing right from the word go. The overall timing of the machine is designed to complement the timing principles of the video and television standards you are using.

This allows you to work in a broadcast environment as the Amiga can communicate its graphic information with great ease. No other personal computer interfaces as simply and effectively without a great deal of expensive add-ons.

Video technology is heavily dependent on sync pulse timing to co-ordinate the various processes it employs. Without this reference it would be impossible to synchronise effects, inputs, sound and the other machines that are so vital to video production today. The fact that the Amiga can come to terms with this through its own timing makes it a winner.

Though the Amiga outputs RGB to your monitor, and this is the basis of all televisual colour systems, no video deck will look twice at this. This is because it will need encoding of some kind.

The most basic encoding is provided by the RF modulator which will produce a fairly skinny image output for you to record. The real advantage of the Amiga's output is the range of resolutions, colours and the interlace option.

The latter is the most important, as all video pictures are made up of two interlaced fields. These consist of two sets of lines, one odd numbered, the other even, flickering away 50 times a second. The fields subsequently combine to produce frames at the rate of 25 a second. So, when you curse the migraine-inducing properties of some Amiga screen modes, remember they are one of the things that set it apart.

Paula, Agnus, Denise and Gary all work pretty hard together to provide you with a basic multimedia platform. They take the weight off the CPU allowing it to concentrate on computing and organisational tasks.

One of the machine's unheralded strengths is, without doubt, its operating system. Workbench 1.3 & 2.0s' multitasking capabilities are something I would be loathe to do without. The ability to shuffle between different programs is essential when co-ordinating and refining anims, text and sound in the way that video production, at any level, requires.

The occasional crash is well worth the cost if you're avoiding the waste of time, energy and enthusiasm that would arise from repeatedly quitting and restarting programs. Much and made of the guru's visits by the Amiga's detractors but if you are sensible, ie don't multitask with games or dodgy PD, then you are soon likely to forget what a guru looks like.

Finally in this round up of the Amiga's attractions for videographers, all our hats must be doffed to the people who produce the myriad range of quality software and hardware for the Amiga range. Titling, animation and paint packages are available that can work with video at any level and cost.

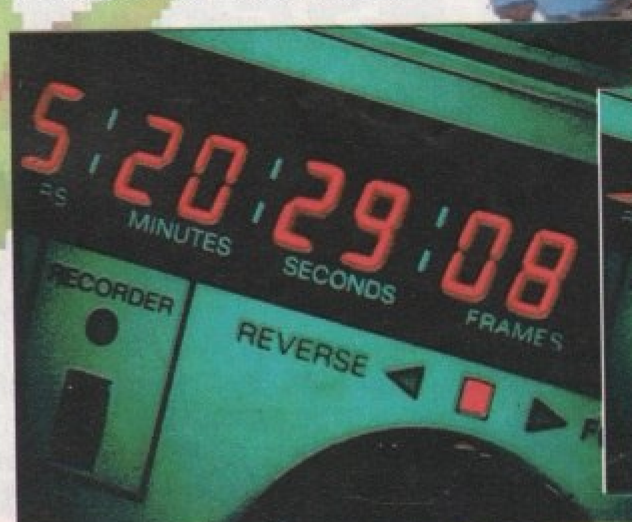
Third-party hardware is appearing which allows the Amiga to compete with the speed and capacity of dedicated video systems. If you can't find something to your requirements in this range, I can only think that you are not looking hard enough.

Before I proceed to to the "what" section, I'll give a brief summary of the main television standards and video formats that you are likely to come across.

The two main television standards are PAL and NTSC. NTSC is used in the American continent and PAL just about everywhere else. The difference between them, simplistically, reduces to rate and res-



The software to create such scenes is readily available...





...as is the video hardware

olution. NTSC uses a frame rate of 30 per second while PAL gets through 25 in the same time.

PAL scores with a greater number of "lines", ie higher resolution – a whopping 576 to NTSC's measly 480 or so. Most readers will be aware of the difference from the appearance of American software screens – this is why those displays always stop around four-fifths of the way down your monitor.

While these differences make little odds to the operation of most software, they tend to be a fairly big deal when working with video, so always ensure that any software or hardware you intend to use is PAL-compatible. Otherwise you are unlikely to see much for your money.

This dual standard is a rather unfortunate one for the European user as American third-party producers have been considerably more active in exploiting the graphic potential of the Amiga than the Europeans. This would not be such a problem if the conversion from an NTSC to PAL configuration was not so demanding.

The Video Toaster is the classic example of this – it squeezes so much out of its custom chips that there just isn't enough headroom left to make it work to the higher PAL specifications. Fortunately, most of these manufacturers are well aware of the potential of the PAL market and are planning products with this capability in mind.

Within these two television standards lie a myriad of recording formats so next up I'll run through the main ones you are likely to encounter.

Adopted

Unless you were adopted and raised by a wolf-pack somewhere in an eastern European forest, you will have come across the Video Home System. VHS became the standard for domestic players back in the early 80s and its faults and strengths are common knowledge.

As far as the Amiga goes it is easily accessible and cheap to use but unfortunately it tends to look it. Editing is possible but unreliable, as crash cutting tends to make as much video noise as its name suggests, and the transport controls are not really up to taking advantage of the editors available.



Take one Amiga, add a genlock and video mixer, and you can be the next Sodaberg



However, as a low cost way of experimenting and learning, it is hard to beat. Remember, the same dos and don'ts you work out at this level will stand you in good stead all the way to SP level.

S-VHS and HI-8 are the next step up and they represent a considerable improvement in quality. Colours are crisper and cleaner due to the the fact that these are pseudo-component systems. Their disadvantages lie in the fact that they cannot be played back on normal domestic systems so transfer requires dubbing and consequent loss of quality.

Frame accurate recording and timecode are options on the higher range models as well as decent editing controlling facilities, but as yet, these are still fairly expensive.

U-MATIC or HI-BAND decks are largely being superceded in the community and small commercial suites by S-VHS and HI-8. Their only conceivable advantage is a slightly more robust three-quarter inch tape medium which might well be more suited to the demands of multiple pass recording, but this is offset by the expense of the PAL encoders required for these machines to accept the Amiga's output.

BETACAM SP (or its equivalent MII) is now the base level professional format. It is a true component system with a robust tape medium run on decks engineered to shuttle back and forth for editing day in, and day out. It has become the lingua franca of the video world and, due largely to its combination of convenience and quality, looks set to remain so for several years yet.

A device called a transcoder will be required to convert Amiga device RGB for ➤

vitals

Your Amiga is ideally suited to video graphics. Here John Butler guides you from tentative titling to vivavious video visuals!

The secrets of those stunning video productions

Here are some handy hints 'n' tips on how to make your videographic productions look smashin'. These will hold true in just about any format or way of working.

The key to any successful production will be planning around your resources. Work out what you want to achieve and the simplest way of doing it. Something done simply and well will always look better than a more ambitious but ill-executed work.

Your Amiga can run material in real time, so take advantage of this by organising as much as possible within it. Remember that as soon as it leaves the computer, quality starts going too. Presentation and authoring packages such as Showmaker and Elan Performer can help arrange the disparate elements of your production ready for a single clean recording pass to yield the best results.

Palette – When preparing graphics for video, always steer clear of "pure" colours – pure red, green, and blue. These are termed "illegal colours", because they tend to smear or "bleed" on tape. Any subsequent transfers down generations will only exacerbate these effects. In general, choose a more restrained palette and avoid highly contrasting colours – you'll end up with cleaner and more effective results.

Text – Always go for large, chunky fonts. Intricate and spindly fonts tend to flicker and do not go easy on the eye. Take care with embellishments such as drop shadows, and check their appearance on tape – they can all too easily end up obscuring rather than enhancing your work.

Interlace – A TV picture is made up of two interlacing fields, so for this reason always use an interlace setting when constructing graphics – it will alert you to flickering effects from pixel-thick lines and badly contrasting colours. Flicker fixers are a waste of time in this game, as they usually interfere with genlocks anyway. If it looks bad on your monitor, ten to one it'll look worse on tape!

Blacking up – In professional use, all tape is recorded with black and striped with timecode before use. Even when you are using VHS it's a good idea to record a black screen to tape before use. This will have the effect of minimising tape noise between recorded sections.

Dropout – To avoid those embarrassing white flecks that can occur with any format, try to refrain from pausing, fast forward and rewinding in preview mode, as these are usually the culprits. The lower end mediums are the most vulnerable.

Framing – Try to remember that you are bound to the shape and dimensions of the format of television and work accordingly to extract maximum impact. Avoid fussy screens and take care to work in "safe" areas so that the beginning and end of your screens don't end up somewhere down the side of the television set.

Monitors, tape and sets all seem to have very different ideas about screen sizes so play it smart and check it on tape before you commit yourself.

What you'll need

Basic setup

One or two VHS decks	£80 upwards each
Rocgen 300 genlock	£120
Deluxe Paint IV	£80
Big alternative scroller	£40

Mid-range setup

Rocgen	£200
DCTV	£300
DPaint4	£80
Imagine 3D	£200
Broadcast Titler 2	£160
Panasonic ss90 S-VHS	£800
Panasonic mixer	£1000

Plus extra RAM and a second floppy drive at the very least.

High-end setup

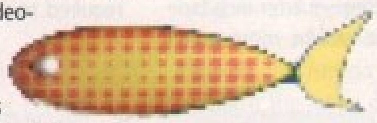
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GVP frame buffer bundle	£1,700

Software as above. Other options:

Real3D	£300
TVPaint	£900
SP Edit deck	£10,000 up
Transcoder	£500

➤ recording. Anyone considering working with digital or one inch machines will not need me to ponder their pros and cons – suffice to say that if you have reached this stage using your Amiga, you must certainly know what you are doing. All these formats have their good points, but generally cost and quality go hand in hand.

The standard Amiga bundle comes as a complete, albeit limited, videographic studio. In your box you will find your Amiga, a graphics package such as DPaint, and a handsome modulator. To begin experimenting, connect this little lot together and plug the output of the modulator to your VHS deck. Set up a colour cycle or anim loop in the paint software and attempt to record it.



Discrepancy

Replaying the results will enlighten you to the first lesson in Amiga video – what you see on your monitor is not what you get on tape. This discrepancy is due to the fact that the RF-encoded signal from the modulator is too weak and unstable for the the deck to record it properly, hence the flickering and dull, smeary colours. If this is as far as you wish to take your system, best forget about tape and play work straight from the computer.

To create a simple video setup, I would recommend the purchase of a genlock, a titler and access to a second VTR. The genlock will not only provide a stronger signal, it will allow you to mix in source material from one machine with Amiga-generated graphics to record onto the second deck.

Thus, you can spice up your old videos with your own smart titles and graphics. If you only wish to record Amiga graphics then you can use the second VTR to generate a stable signal for your output.

I recently saw a local cable station using a similar setup to generate a teletext service with a rotating logo in the corner, and very effective it looked too. A genlock allows you to begin to explore the basic processes of image layering that are the foundation of television and videographics.

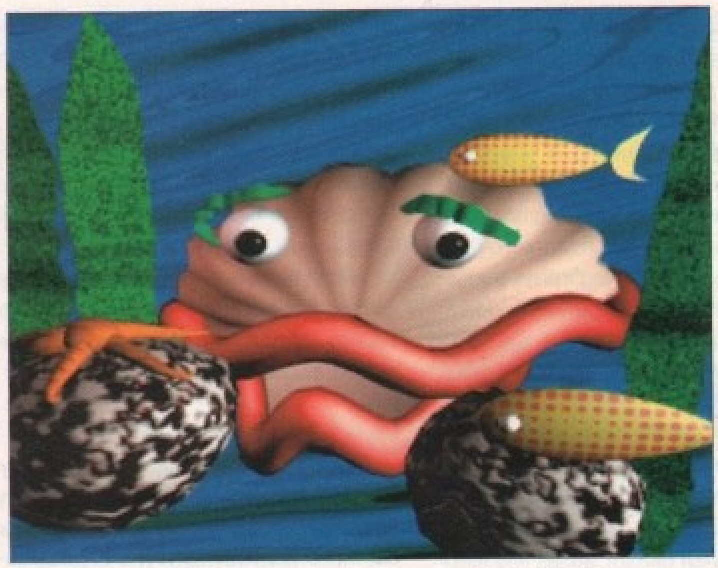
More than anything else – resolutions, screen size etc – the number of colours you are able to put onscreen will determine how professional your productions look. Broadcasting uses 24-bit planes to provide up to 16 million colours, which is approximately the maximum an eyeball can distinguish.

The basic Amiga can pump out 4,096 (in its own peculiar fashion) which is nice enough for a computer, but a little light for even semi-pro work. A good halfway house between what the Amiga offers and the professional needs is provided by pseudo-frame buffers such as HAM-E and DCTV.

Getting serious involves bypassing Amiga output and getting a frame buffer, access to frame-accurate recording and the best genlock/encoder combination you can afford. In order to integrate this with other editing and production facilities, you will probably have to start considering sync pulse generators and timebase correctors, and their place in your world.

A year ago there weren't any frame buffers available for the Amiga but now the potential videographer can hardly move for them. I cannot recommend any particular one – you're best off looking around and picking the one that suits you best.

Things to watch out for are software support and extras such as frame grabbing capabilities. Frame-accurate recording is necessary at this level as none of these devices can pump out video in real time yet (some vapour-ware promises this, but you can be sure it won't be cheap and it won't be soon). The demands of single frame recording are likely to leave S-VHS tape as ragged as a tramp's underpants. This format is best suited to frame-accurate editing and, I suspect, the medium is too fragile to withstand 250 recording passes over a ten second stretch of tape.



Imagine is just one of the superb packages available to the Amiga videographers

This level really requires Betacam SP, and this is where you will begin to realise what a cost effective system the Amiga can help provide.

Speed and memory make life sweeter at any level, but from DCTV up you are going to have to seriously consider upgrading your system. 1500/2000/3000 models are easier to upgrade, so if you're thinking of purchasing an Amiga specifically for videographic use then go for one of these. The A500, however, is increasingly well served for peripherals so it's still a good buy for non-frame buffer work.

A package like TV Paint will need 16Mb of 32-bit RAM to cut and resize a 740 x 576 picture, and this is the kind of thing you will be repeatedly asked to do with this kind of package.

That's just about all I'm going to say about setups, as I'm loathe to recommend particular pieces – what suits me is unlikely to suit another. Always remember that software and hardware are needed to make a system work so budget seriously for both when you are planning.

The great thing about graphic hardware and software is that you can see what you're getting, so start finding out what combinations will suit you best.

I hope you have benefited from this article and it leads at least some of you to begin experimenting with the video capabilities of the Amiga. There has never been a personal computer like it, and I'm sure it's closer than any other to the ones we'll see in the future. AC

Glossary

PAL	Phase Alternate Line system. The European broadcast standard.
NTSC	National Television Standards Committee. The American standard, sometimes cruelly interpreted as Never Twice Same Colour!
Genlock	A device for mixing video sources by synchronising them. Capable of masks, wipes and fades.
Generation	This refers to the number of times that a recorded section has been transferred between tapes. Thus something recorded straight from the computer is "first generation" but it may to be looped up by recording to another VTR so it will go down a generation. Up to digital level the generation game is one where everyone loses in terms of quality.
TBC	Time Base Corrector. This expensive little box tries to cope with the differences that arise between the icy precision of digital sync and the wayward wow and flutter of tape and transport engineering.
Y/C	Luminance (brightness) and chrominance (colour). These are the basic components of the signal in S-VHS systems.
A-B roll editing	Combining source material from two VTRs to produce a seamless single edit.
Timecode	This is a synchronisation code recorded onto tape in professional systems – and is also known as SMPTE. It provides a reference for frame-accurate sync whatever machine the tape is played back on.

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Features on screen graphics, Full Remote Control, Signal Enhancer and c/w Amiga Scart Cable. 1Year Warranty PRICE BREAKTHROUGH!
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1 Mb. Disk Drive
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TV Modulator
4096 Colours
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PLUS...All OUR Amigas are backed by Harwoods Great Service

[Please see full details in our Ordering Made Easy' panel final page]



MEGA 31* AMIGA 1 PACK 1 POWERPLAY

THAT'S RIGHT HARWOODS HAVE PUT TOGETHER THE ULTIMATE AMIGA PACKS YET AGAIN... STARTING WITH POWERPLAY PACK 1 WHICH INCLUDES 31* GREAT GAMES!

Just look at what you get NOW...

Our packs always contain Professional Games NOT PD or multi-game disk titles

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- **PLUS.... 18 MORE GREAT GAMES,** THERE'S SOMETHING FOR EVERYONE...

BLOODWYCH - Fantasy role-playing game, great interaction with your computer created environment
BUBBLE+ - Help the dawdling ghost and the soap bubble, escape from the old deserted manor house
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JUMPING JACKSON - In a deluge of colour and sound save, the earth from sadness and melacholy music
KRYPTON EGG - A classic Breakout game, 60 screens, separated by 6 combat sequences
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PURPLE SATURN DAY - Four arcade games, an exciting high speed trip into total cosmic 3D space
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STIR CRAZY (Featuring Bobo) - Bobo & his inmates are planning a stunning trampoline jump prison escape
SKYCHASE - Airborne combat for every simulation fan. In this one or two player game, battle against your MIG flying adversary in your F-16 Falcon.
SKYFOX II - Skyfox II, the only ship fast enough to carry on the Skyfox legend. Fight to blow your federation enemies from the Galaxy, at speeds of 9000 kilometres/second!
STRIKE FORCE HARRIER - Puts you in the cockpit of one of Britains most exiting fighter aircraft. Multiple skill levels let you progress to become an ace pilot
TINTIN ON THE MOON - We've been captured by Colonel Jorgen and he's tring to scupper the moon mission. Come on Tintin, you're the only one who can save us, and be the first on the moon
TV SPORTS FOOTBALL - Strap on your helmet for American football simulation that looks like the real thing.
XENON 2 MEGABLAST - This time it's war! The Xenites are back and have thrown time itself into turmoil.

We reserve the right to substitute individual software titles or pack items should the need arise.

CARTOON CLASSICS MEGA 31* AMIGA A500 PLUS

BUY YOUR AMIGA WITH 2Mb FOR ONLY £40 EXTRA!!! (ie. 1Mb RAM Expansion)

See Page 4 overleaf for details

*** OUR POWERPLAY PACK 1 PREVIOUSLY CONTAINED 21 GREAT GAMES BUT, NOW WE'RE INCLUDING THESE 10 FANTASTIC BONUS GAMES... ...BUT ONLY WHILST STOCKS LAST!**

DATASTORM - The fastest shoot 'em up of all time! Defender with a vengence!!!
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RVF HONDA - Formula 1 motorbike racing at 170mph on a Honda RC30 racing bike!
DRIVIN' FORCE - For driving maniacs! 12 competitions day or night with 6 vehicles!
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ROCK 'N' ROLL - Crazy action game accompanied by fantastic Rock 'n Roll sounds!
SKWEEK- Paint the town PINK, kill Schnoreuls and dominate 99 levels of Skweezland
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...AND HARWOODS ALSO GIVE YOU A SUPERB BROCHURE OFFERING UP TO 16 NIGHTS FREE HOTEL ACCOMODATION IN AN EXTENSIVE SELECTION OF 400 HOTELS AROUND THE UK PLUS NOW A SPECIAL BUDGET FRANCE SUPPLEMENT IS INCLUDED TOO!

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HARWOOD
POWERPLAY PACKS

All our packs contain the new Amiga A500 Plus.
(1.3 Amigas may still be available to special order, please enquire.)

POWERPLAY — MEGA 31* — MONITOR PACK 2 — PACK TWO

HARWOOD'S BRILLIANT 1Mb AMIGA 500 PLUS 'MEGA 31*' GAMES PACK 2

That's right you get the fantastic Amiga & **ALL THE EXTRAS** detailed in Harwoods "Mega 31*" Pack 1 AND you also get...

THE PHILIPS CM8833/II STEREO COLOUR MONITOR

OR...YOU CAN CHOOSE A PHILIPS MONITOR TV AT NO EXTRA COST! See page 6 for FULL details of this remarkable Fast Text Monitor TV

BUY AN AMIGA WITH 2Mb FOR ONLY £40 EXTRA!!! (ie. 1Mb RAM Expansion included)

A SPECIAL PACK FROM HARWOOD'S YOU SEE AND HEAR THOSE GAMES WITH SUPERB CLARITY

Our monitor section on page 6 gives full details for your choice of Philips Monitors & Monitor TV's

£629.95 Including VAT

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Plus...

THE SUPER STAR LC 200 COLOUR PRINTER...

OR...YOU CAN CHOOSE A PHILIPS MONITOR TV AT NO EXTRA COST! See page 6 for FULL details of this remarkable Fast Text Monitor TV

Featuring... 185/40 cps, Full Colour 9 Pin NLQ Dot Matrix Printer with a FREE Dust Cover and cable to your Amiga. *(See printer panel for details)*

IF YOU WISH, REPLACE THE LC200 WITH A CITIZEN SWIFT 9 COLOUR AT NO EXTRA COST!!! OR... IF YOU PREFER A 24PIN COLOUR PRINTER, JUST CHOOSE FROM OUR RANGE & ADD THE DIFFERENCE IN PRICE BETWEEN STARS LC200 & 'YOUR CHOICE'. (eg. Citizen 224, add just £50)

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PHILIPS CM 8833/II STEREO COLOUR MONITOR
See Monitor Panel on Page 6 for Details

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STAR LC200 9 PIN NLQ FULL COLOUR PRINTER
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SUPERBASE II PERSONAL (Database)
SUPERPLAN (Spreadsheet)...1Mb.

+

A GREAT TEN GAMES PACKAGE

Datastorm, Drivin' Force, Pipe Mania, Dungeon Quest, Rock-N-Roll, E-Motion, Tower of Babel, Skweek, RVF Honda, and Grand Monster Slam.

Plus...

- THE SIMPSONS
- CAPTAIN PLANET
- LEMMINGS
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WE MEAN BUSINESS AT A GREAT PACKAGE PRICE OF JUST...

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EDUCATION — PACK A

HARWOODS LEARN & PLAY

PRIMARY & JUNIOR PACK A

Get your children off to the right computing start with this software learn and play pack...

PROF. PLAYS A NEW GAME
PROF. LOOKS AT WORDS
PROF. MAKES SENTENCES
PROF. HUNTS FOR WORDS

Active, enquiring young minds love seeing the cartoon character called Prof. entertain and teach. Children take charge of Prof. on the computer, active learning. Follows National Curriculum(N.C.).

HOMEBASE
Ideal home storage system. Keep household lists, student records etc. Easy to use 'push button' controls.

PRIMARY MATHS COURSE
Around 24 modules in this course from 3 yrs old right up to secondary level. Follows N.C.

READING & WRITING COURSE
24 module course. Teaching from the computer and books. For early starters & the dyslexic.

EDUCATION — LESSON A

A GREAT EDUCTIONAL PACK FOR YOUR CHILDREN AT A FRACTION OF THE NORMAL COST

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EDUCATION — PACK B

HARWOODS LEARN & PLAY

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GCSE examination level studies on your Amiga computer that's fun!

MICRO ENGLISH, MICRO FRENCH AND MICRO MATHS
A set of three complete self-tuition courses to GCSE level which can also be used for revision work. All programs adhere to the National Curriculum and were designed and tested in schools by professional teachers. Micro French includes 'real speech' to help your accent!

PEN PAL- Graphical Word Processor
A fantastic word processor with all the tools you'll need to create effective written work. Ideal for home work, projects etc. or for the families letters. Text wraps automatically around graphics, even as you type! Includes a built-in database and Forms Manager.

HOMEBASE
Homebase is the ideal information storage program for things like household lists, student notes, and children's educational projects. Inc. clearly labelled 'push button' controls and clear comprehensive reference manuals.

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VISA — Access — Switch

GORDON HARWOOD HARWOOD HARWOOD *Computers*

ALFRETON DERBYSHIRE

The Closer you look, The Better we look.

*Finance terms are available (subject to status) for most products, please see our ordering panel at the end of this advert for full details

SOUND AND VISION
Words and Pictures
CDTV



IMAGINE, IF YOU CAN, THE CONCEPT OF A NEW, MORE POWERFUL AMIGA...

...WITH 1 MEGABYTE OF MEMORY, AND A COMPACT DISK DRIVE OF ALMOST INFINITE SIZE. A DISK DRIVE SO VAST, IT CAN STORE HUNDREDS OF MILLIONS OF DIGITS OF DATA. THIS DATA COULD BE, SPEECH, ANIMATED PICTURES, DIGITISED STEREO SOUND, COMPUTER IMAGES OR WHOLE ENCYCLOPAEDIAS.... AND MORE.

IMAGINE THIS, AND YOU CAN START TO GRASP THE CONCEPT OF CDTV.

THE INTEGRAL COMPACT DISK DRIVE, IS THE KEY TO THE POWER OF CDTV. ITS STORAGE CAPACITY IS EQUIVALENT TO AROUND A QUARTER OF A MILLION FULL PAGES OF TEXT. THIS WHEN INTEGRATED WITH THE 1 MB OF INTERNAL AMIGA CIRCUITRY, CREATES A SYSTEM, WHICH FROM A CD DISK, CAN GIVE YOU ACCESS TO AN UNIMAGINABLE SPECTRUM OF REAL WORLD IMAGES, NEVER SEEN COMBINED BEFORE. THESE VIVID IMAGES, WITH WORDS AND SOUNDS, GIVE YOU A WHOLE NEW DIMENSION IN HOME EDUCATION, ENTERTAINMENT & INFORMATION TECHNOLOGY. AND... DON'T FORGET, THAT CDTV CAN PLAY IN SUPERB QUALITY, ANY NORMAL AUDIO MUSIC CD, AND IT CAN ALSO PLAY THE NEW CD+G DISKS, WHICH GIVE DIGITAL SOUND AND ON SCREEN GRAPHICS. ON CD DISKS NOW AVAILABLE, THERE ARE EDUCATIONAL PACKAGES, ENCYCLOPAEDIAS PACKED WITH REFERENCE INFORMATION, STUNNING GAMES, MUSIC SYSTEMS AND MANY OTHER NEW AND VARIED SUBJECTS, INCLUDING WHOLE WORLD ATLASES OR EVEN THE COMPLETE WORKS OF SHAKESPEARE, EACH ON ONE CD DISK!!! **CDTV - NOTHING LESS THAN REVOLUTIONARY**

FREE CDTV STARTER PACK!!!

WHEN YOU CHOOSE YOUR CDTV FROM GORDON HARWOOD, NOT ONLY DO YOU GET OUR LEGENDARY SERVICE, BUT WE GIVE YOU A CDTV STARTER PACK, TO GET YOU EXPLORING YOUR NEW WORLD - STRAIGHTAWAY. THIS INCLUDES A SUPERB SELECTION OF CD DISK TITLES INCLUDING THE WELCOME TUTORIAL & HUTCHINSONS ENCYCLOPAEDIA, PLUS ... FOUR GAMES, SHERLOCK HOLMES & THE HOUND OF THE BASKERVILLES, SIM CITY, CHAOS IN ANDROMEDA, AND THE ACCLAIMED LEMMINGS, WORTH IN TOTAL ALMOST £170.00. IN ADDITION IS THE INFRARED REMOTE CONTROLLER, AND ALL THE HARDWARE NEEDED TO GET YOU CONNECTED.

ALL THIS FOR JUST £499.95

CDTV IS THE SAME SIZE AND STYLE AS MOST VIDEO RECORDERS, SO IT CAN SIT UNOBTRUSIVELY ABOVE OR BELOW YOUR HOME TV AND/OR HI-FI. AND WITH ITS INFRARED REMOTE CONTROLLER, IT CAN BE OPERATED FROM YOUR ARMCHAIR. BUT PERHAPS MOST IMPORTANTLY, IF YOU ARE A COMPUTER ENTHUSIAST, REMEMBER THAT INSIDE EVERY CDTV, IS AN AMIGA, JUST WAITING TO BE USED. SO LATER ON, YOU'LL BE ABLE TO BUY THE OPTIONAL KEYBOARD AND DISK DRIVE, TO GET INTO THE WORLD OF AMIGA COMPUTING. PRINTERS, DIGITISERS, GENLOCKS AND OTHER ACCESSORIES,CAN ALL BE CONNECTED TO GIVE ACCESS TO MANY OTHER EXCITING FACILITIES, AND ALSO MANY OF THE EXISTING SOFTWARE PACKAGES AVAILABLE FOR THE AMIGA COMPUTER. NEVER BEFORE HAS THERE BEEN SO MUCH POTENTIAL FROM ONE NEW STUNNING SYSTEM, PACKED WITH **TODAYS TECHNOLOGY.!**

CALL IN AND SEE US FOR YOUR PERSONAL DEMONSTRATION, OR PHONE US FOR YOUR FREE DETAILED CDTV INFORMATION PACK.

CDTV ACCESSORIES

Please call for latest availability.

CD 1220 KEYBOARD	AN 89 KEY QWERTY KEYBOARD	£49.95
CD 1252 MOUSE	INFRARED MOUSE WITH BATTERY SAVER.	£49.95
CD 1200 TRACKBALL	INFRARED TRACKBALL, WITH THE OPTION OF DIRECT CONNECTION TO EXTEND BATTERY LIFE. DUPLICATES FUNCTIONS OF 2 BUTTON MOUSE & INCLUDES TWO 9 PIN PORTS FOR STD. JOYSTICKS	£79.95
CD 1400 CADDY	FOR HOLDING CD WITHIN DRIVE	£9.95
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CD 1301 GENLOCK	PAL BASED VIDEO INTERFACE CARD FOR SUPERIMPOSING CDTV IMAGES OVER A VIDEO SIGNAL PROVIDED BY ANY STANDARD VIDEO SOURCE	£149.95
CUMANA 3.5" DRIVE	CDTV COMPATIBLE AND STYLED IN MATCHING BLACK. (Same spec as CAX 354 on page 4 of this advertisement)	

Many Amiga Accessories & Peripherals (e.g. Printers, Disk Drives, Software etc.) are compatible with CDTV. Please phone us for compatability information.

HARWOODS AMIGA
PRO-GEN
NEW LOWER PRICE



PROFESSIONAL QUALITY GENLOCK FOR COMPUTER AND VIDEO MIXING, AT A DOWN TO EARTH PRICE!!!

Please note the above photograph shows Spectracolor which has now been replaced by Photon Paint 2.0

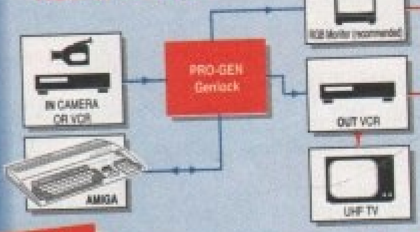
PRO-GEN Amiga Genlock

The Pro-gen AMIGA Genlock allows you to mix your Amiga display with any PAL video signal whether it is from a VCR, Laserdisk player or a Camcorder. In fact any item of video equipment which outputs a PAL composite video signal.Combined with the Amiga computer the Pro-Gen gives you the facilities of a special effects & video titling suite. Take your own films & give them a professional look by OVERLAYING TITLES or by SUPER IMPOSING YOUR OWN GRAPHICS created in packages like Photon Paint 2.0 or Deluxe Paint. Pro-Gen is supplied with micro illusions superb Photon Paint 2.0 package.

FREE

A powerful Lo-and-Hi resolution hold and modify (HAM) paint program, with overscan (NTSC/PAL) and special effects for your Amiga Computer including all the following... **Contour Mapping:** drapes a brush over a 3D "landscape". Pixel intensity values decide the peaks and valleys, while a specially developed ray-tracing algorithm maps the image precisely. **Surface Mapping:** around 3D objects, both geometric and free hand drawn. **Luminance:** sets the light source and intensity. **Shadowing:** automatically with control of size and offset. **Brush Control:** twist, tilt, resize, flip, rotate, bend, adjustable transparency, stretch etc etc. PLUS LOTS MORE! A great program allowing use of 4096 colours. Choice of horiz/vert page print, negatives, anti-aliasing, dithered print, adjustable brihgtness etc.

How it works:



STOP PRESS

PRO-GEN... NOW INCLUDES A VERY VERSATILE MULTI COMPONENT VIDEO TO GENLOCK CONNECTING CABLE KIT. THIS ALLOWS PRO-GEN TO BE USED STRAIGHTAWAY WITH MOST POPULAR VIDEO EQUIPMENT, WITHOUT THE NEED TO HUNT DOWN THE CORRECT CONNECTING CABLES. THIS KIT CAN ALSO BE USED TO CONNECT IN OTHER WAYS... eg. VCR TO VCR etc.
A KIT TO START YOU OFF RIGHT FROM THE MOMENT YOU OPEN THE BOX!!!

NEW LOWER PRICE

PRO-GEN with Photon Paint 2.0 ONLY £99.95

Mode Switch-box for Genlocks

Features Include
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- Supplied With Genlock Extender Cable Worth £9.95
- Switch-box Switches Between Foreground, Background, Video And Computer Modes.

£29.95

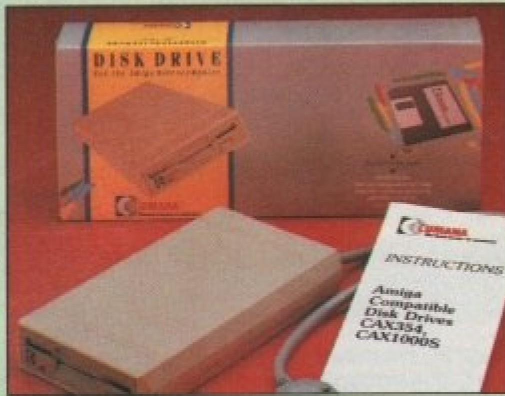
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AMIGA DRIVES & MEMORY

Cumana CAX354 3.5" External 2nd Disk Drive.

- ☆ Features Include
- ☆ Long connecting cable
- ☆ 1Mb, (880K Formatted) Capacity
- ☆ Enable/Disable Switch,
- ☆ Throughport
- ☆ Access Light
- ☆ Compatible with Amiga 500/1000/1500/2000/3000 and CDTV

£57.95



NOW SUPPLIED WITH A FREE 3.5" DISK HEAD CLEANER for optimum reliability

BLACK CDTV COMPATIBLE VERSION AVAILABLE NOW!!!

NEW! GVP 52-105Mb HARD DISK DRIVE WITH MEMORY EXPANSIONS OF UP TO 8Mb.

- ☆ Capacities of 52 or 105Mb available
- ☆ Connects to sidecar bus on L/H side of A500/A500 Plus
- ☆ Autoboots with Kickstart 1.3/2.0, boot enable/disable switch
- ☆ Sockets for up to 8 Mb of RAM expansion
- ☆ SCSI Port allows up to 7 other devices to be connected
- ☆ Supplied with easy to use software
- ☆ 2 Year Warranty Complete with dedicated PSU
- ☆ Mini slot for future expansion capabilities
- ☆ PC-AT Emulator planned to be available for 1992

GVP PRICES: RAM SIZE	CAPACITY 52Mb.	CAPACITY 105Mb.
0Mb.	£359.95	£549.95
2Mb.	£429.95	£629.95
4Mb.	£509.95	£749.95
8Mb.	£699.95	£929.95

Call for... UPGRADE PRICES!

EDUCATION SOFTWARE

DON'T JUST PLAY GAMES WHEN YOU CAN LEARN WITH YOUR AMIGA TOO!

MICRO MATHS - 24 easy to use programs for GCSE ('O' Level) revision or self tuition	£21.95
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MICRO ENGLISH - A complete programe of self-tuition up to GCSE standard	£21.95
PRIMARY MATHS COURSE - Ages 3 to 12, Complete 24 Programme Course.	£21.95
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PROF: Hunts for Words - With clues for Prof. and his young audience, children can hunt for words and complete a story.	£24.95
PROF:Looks at Words - You direct Prof. around the screen searching for letters to complete the words. 17 levels of play.	£24.95
PROF:Makes Sentences - Children help Prof. make up sentences by unjumbling sequences of words - great animation.	£24.95
PROF:Plays a New Game- Comes with a story disk, audio tape, and an illustrated raeding book.	£24.95

HARWOODS AMIGA 1Mb PRO-RAM PLUS

ADD MORE POWER TO YOUR AMIGA 500 PLUS WITH A FULL 1Mb. MEMORY UPGRADE!!!

- ☆ 1Mb. RAM expansion for the Amiga 500 Plus
- ☆ Gives a total of 2Mb. of RAM
- ☆ Easily fitted without any dismantling in the trapdoor expansion slot underneath Amiga. DOESN'T invalidate your warranty!
- ☆ Low power consumption 2 Yr Guarantee!

A GREAT NEW OFFER FROM HARWOODS

Only... **£44.95**

0.5 Mb PRO-RAM

- ☆ Compatible with Amiga A500 and 500 Plus
- ☆ Gives A500 a total of 1Mb Memory + Clock
- ☆ Gives 500 Plus a total of 1.5Mb Memory

Only... **£29.95**

AMIGA SOFTWARE

Music-X: The ultimate software for professional MIDI sequencing. The software includes a configurable librarian and a synthesiser patch editor. All you need to recreate a song can be recalled from one performance file including sequences, MIDI routing, sync setup, keyboard maps & synthesiser or drum machine patch libraries. **NEW LOW PRICES - £54.95 or just £74.95 with midi-interface!**

MIDI INTERFACE (5 Port): In, Out, Through plus 2 switchable thru'/out. Includes cable. £24.95

AMOS: AMOS allows you to access the power of the Amiga with ease. 500 different commands make AMOS a sophisticated development language. The AMOS animation language allows you to create complex animation sequences. 300 page manual and over 80 example programs £49.95

Amos Add on Modules: (BOTH require Amos prog.)
Amos Compiler Amos 3D

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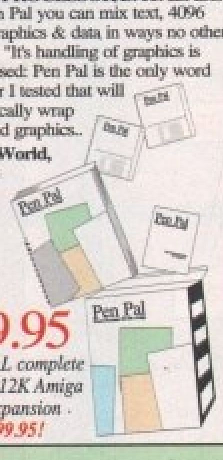
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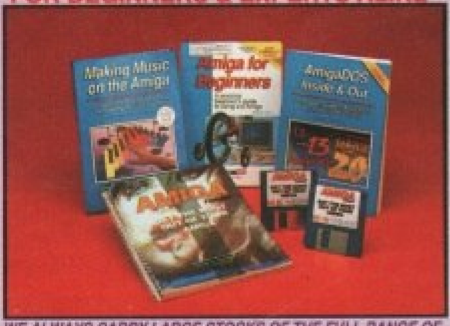


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CITIZEN 124	BLACK ONLY	£4.95	£24.95	N/A	N/A
CITIZEN SWIFT 9	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
SWIFT 24/24E/224	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
STAR LC10/20	BLACK/COLOUR	£4.95	£24.95	£6.90	£36.50
STAR LC200	BLACK/COLOUR	£6.95 ZX9	£36.95 ZX9	£12.95 ZX9CL	£69.95 ZX9CL
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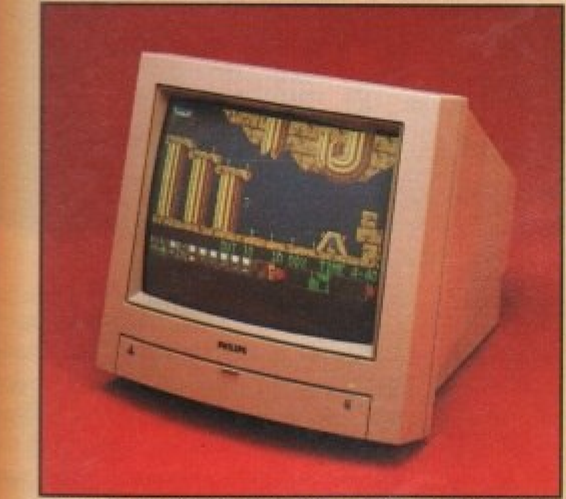
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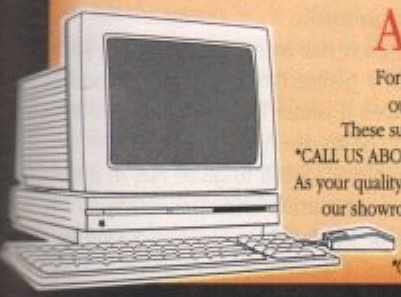
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Genuine fun!

Sarah Williams tries out the latest batch of educational releases

The Shoe People

Gremlin Graphics – £25.99

Recommended for ages 4 to 6

Those leathery – but very friendly – children's cartoon characters, The Shoe People, have brought some genuine fun to the younger children's National Curriculum in this excellent double disk package on Gremlin's brand new First Class label.

Many skills essential for early success at school are exercised, including memory, recognition of shapes, colours and patterns, and knowledge of the alphabet, numbers and words.

There are three activities on each disk, all aimed at the four to six age group. Each has various levels of difficulty. Those on Disk One are Trampy visits his Friends, Sgt Major Sorts It Out, and Margot's Magic Colouring Book, while Disk Two offers The Great Alphabet Robbery, Wellington Goes to the Park and Charlie's Big Day.

Trampy visits his Friends features friendly vagrant Trampy, who has a remarkable number of friends in Shoe Town. The trouble is, he only gets to see them at the end of his eventful journey if the young student is good at matching objects and finding or spelling the correct words.

It starts with the simple matching of objects encountered by Trampy as he tramps his way towards a meeting with Sergeant Major, and progresses to typing in the names of objects with no help from the computer as Trampy heads for a chin-wag with the Marshall.

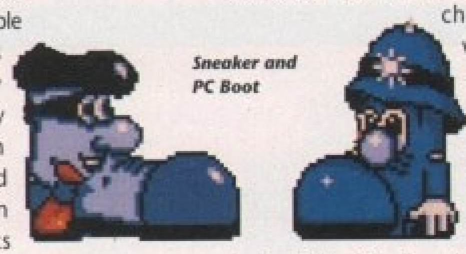
Sgt. Major Sorts It Out stars Baby Bootee, who has brought chaos to Sergeant Major's store by knocking everything off the shelves. Now he has to put things back in the right places.

There are two levels, Easy and Hard. With Easy, each shelf already has the first object on it. In Hard, the shelves have to be allocated by the child.

Baby Bootee automatically points to the object he wants placing on a shelf. Pressing the spacebar makes Sgt Major's baton point at each shelf in turn. When the correct shelf is indicated, the young student hits the Return key.

Margot's Magic Colouring Book is a very basic paint program operated by keyboard or mouse, though I'm sure young children will find it very exciting as they fill shapes in one of five ready-drawn pictures with colours, or create their own drawings from scratch. Pictures can be saved to disk and printed.

The Great Alphabet Robbery is one for PC Boot! That shifty sole(!) Sneaker is trying to escape after stealing the letters of the alphabet. The aim of this exercise is for the child to recognise words and letters so far encountered in other Shoe People activities.



Sneaker and PC Boot

Wellington Goes to the Park offers five choices for the basis of the game – blocks, more blocks, single dice, double dice and numbers. A dice or numbers appear on one side of a see-saw.

If the child recognises the number on the dice, or adds numbers together correctly, the see-saw creaks into the perfectly balanced position and Wellington jumps up and down in a puddle, covering himself with mud. If the answers are incorrect, a cloud appears and rinses Wellington clean.

Charlie's Big Day has the clown performs easy, medium or hard tricks, according to the child's initial choice.

When Easy is selected, the student is asked what trick Charlie did first. If this is answered correctly, Charlie performs the same trick again, followed by another one. Now the child is asked to recall the two tricks, and so on to as large a sequence of tricks as possible.

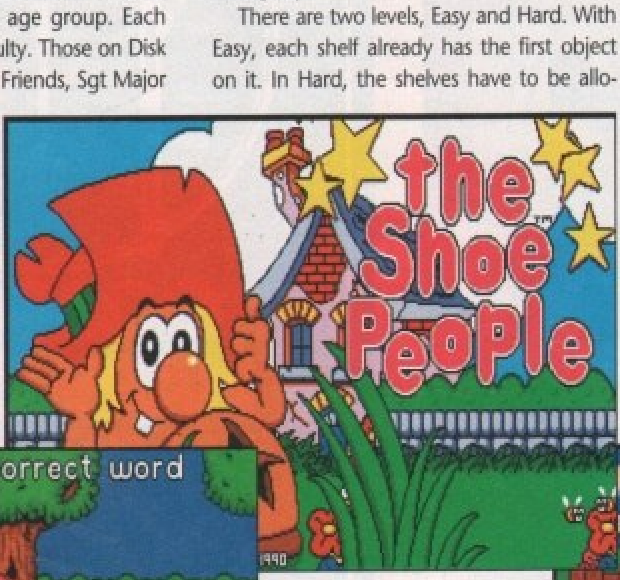
If Medium is selected, the tricks are generated randomly each time. With Hard, Charlie performs a whole sequence of tricks twice, and then begins a third. The child is asked which trick completes the sequence. If the answer is correct, then every other turn another trick is added to the sequence. One or two adults – including me – have had trouble with this one!

All in all, The Shoe People is an ideal debut program from the First Class label. All selections, except when running Margot's Magic Colouring Book with the mouse, are made very easily by hitting the biggest key on the keyboard, the spacebar. Each time it's hit, an arrow moves on to the next choice. The choice is then executed by the second biggest key, Return.

Young children will love the graphics and the sound effects, particularly the sound of the Shoe People clumping along, as well as the noises made when Charlie bangs his drum, spins plates on sticks and performs other wonders.

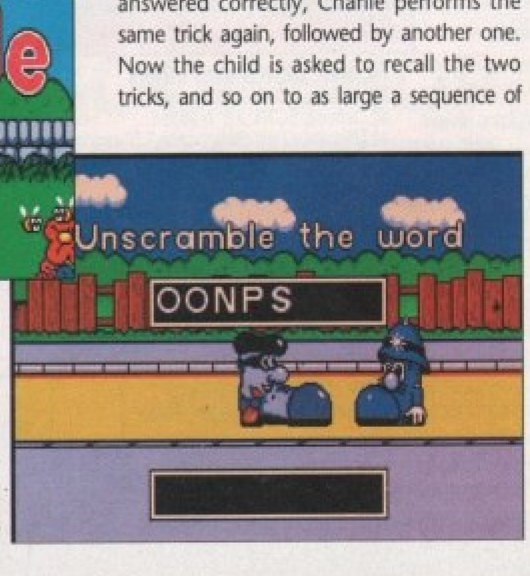
And to add even more value, the package also includes a Shoe People book, The Shoe Town Gold Rush, worth 85p, and a badge featuring one of the Shoe People.

One special note for teachers – the package is aimed at National Curriculum attainment targets one to three.





The graphics are clear and engaging



"Any stolen cutlery in your bag, Sneaker?"

Spellbound!

Lander Software – £25.99

Recommended for ages 7 to 16+

Spellbound! is really as much about learning gameplay, particularly control of a joystick, as it is about spelling.

However, that's not such a bad combination of attributes. Learning should be fun, shouldn't it? And Lander software have provided a superbly entertaining way of learning with this one.

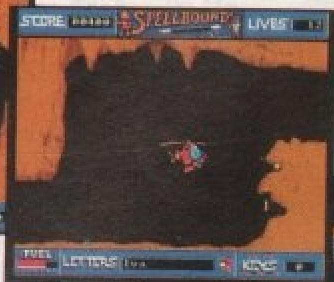
You may already know something about the character Henrietta from Lander's previous programs. You probably don't know, however, that she has an American cousin called Hal who enjoys a quest just as much as his English relative.

Morgana has entrusted her magic wand to barmy genius Professor Grime, who has concealed it under locks and keys – five of each, to be precise.

The player's job is to guide Hal, in a helicopter, submarine and spacecraft, in his quest for the five keys. To win a key, you must spell a word, a letter of which is made



Spellbound has an arcadey feel



Collect those letters in Spellbound



Can you open the door?

available to you in a random order each time you kill one of Professor Grime's cleverly disguised robots. You kill them by hitting your Fire button, thus causing your ship or craft to fire on the enemy.

You can set up almost infinite levels of difficulty by specifying the number of lives, the speed of the robots, the quantity of fuel and whether the walls you encounter are "safe" – they don't harm you when you hit them – or "deadly". The more difficult you make things for yourself, the more your potential for earning points.

There are five adventures for Hal, and a key is won each time an adventure is successfully completed – that is, when the letters for a word have been picked up in the correct order and the ship or craft has been steered to the final exit point. When you've won the five keys, you gain possession of the all-powerful wand, thus preventing further misuse of it.

This is a program that almost anyone will find enjoyable. It's not possible to say which age group it appeals to most, though the skills involved mean that children under about seven may find it too difficult.

Lander Software themselves just about sum it up when they refer to it as "computer edutainment".

Picture Book

Triple R Education – £19.95

Recommended for ages 2 to 5

Younger children usually learn lower case letters before capitals. For this reason, they can be easily confused by the capital letters on computer keyboards.

It's good to see that with Picture Book, Triple R Education have provided plastic keyboard overlays featuring lower case letters.

Not only that – while one of the overlays is for the usual Qwerty keyboard, the second one has the keys in "a" to "z" order reading from top left to bottom right of the letter keys. The program is very easily switched from Qwerty to "a" to "z" mode by selecting the option from the main menu.

So much for keyboard considerations – what about the program itself? Picture Book, which comes on one disk, comprises four programs – Alphabet, Snap, Spell It and Count 'Em. They will provide many hours of learning and entertainment for the target audience, and all four programs can be loaded into memory at once, so quite tiny children can be left playing alone without the confusion of loading.

Alphabet is an electronic version of the traditional ABC book. When a letter key is pressed, a drawing of an item which begins with that letter, and the full name of the item, appear on the screen. The size of each colourful drawing can be altered using the < and > keys.

With the largest picture size, the name of the item is not displayed, giving the parent or teacher the chance to check whether the child can spell the word before it's revealed.

Some of the drawings are animated. For instance, "j" is illustrated by a jack-in-the-box, the jack springing out each time it is retyped. Most, if not all, children will particularly like this feature.

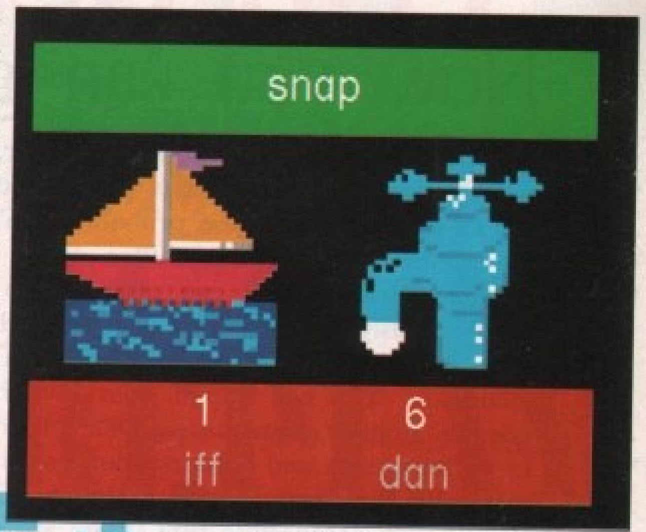
Snap is exactly what you might expect, with the added feature that you can choose whether to match two pictures, a picture and an initial letter, or a picture and a word. Up to three children can play at once, with a designated key for each player to try to hit first when two corresponding items appear. The first to score three is the winner.

Count 'Em is an excellent introduction to the world of numbers. It involves the young players pressing the number key which corresponds to the number of pictures displayed. There are three levels – numbers up to three, six and nine – which can be cycled through by pressing the spacebar.



Triple R's alphabet

Spell It has two levels – Easy and Hard – and is an ideal introduction to words. On the easy level, the word is displayed onscreen together with the corresponding picture. A smaller version of the same picture is repeated as many times as there are letters in the word across the bottom of the screen, each one being replaced by a correct letter as the child types.



No match there!

As the child attempts to copy the word, any correct letters pressed will be put into the appropriate place. Incorrect letters simply have no effect.

On the hard level, children have to try to spell without the words being displayed for copying, though help is given after a noisy "raspberry" sound if the child gets the word wrong.

The graphics are simple and colourful – just right for the target age group. Some of the sound effects – for instance, the roar of the lion, the meaow of the cat and the sound of the apple being munched – are excellent.

Picture Book is a friendly and encouraging welcome to computers for the very young. Triple R Education have got it just right.

Look! Hear!

Hokianga Software – £45

Recommended for ages 4 to 8

Look! Hear! is a bright way for younger children to learn how to read and pronounce words. The program uses colourful, animated graphics and so is probably more interesting to children than using the less inspiring alternative, a textbook.



Natural digitised speech is a good feature of the program, especially as it's well spoken and easily understood. This is specifically used to teach and test "sight words" – the 240 core words children up to and including the eight-year-old level should be able to recognise and pronounce instantly.

Look! Hear! is presented on four disks. The first contains the program and the alphabet. You can choose whether the alphabet should be displayed in small or capital letters. When the letters appear onscreen the vocals call what the letter is.

There is a test involving the posting of envelopes. A letter is called out, and to show you recognise it you click on the envelope you think contains the letter. If you've chosen the correct one, it will automatically be posted into a letter box.

The second and third disks consist of 12 lists (six on each disk) of core words, with 20 words in each list. As with the alphabet, you can play the test. Also, you are able to show all of the words in a list at one time.

The program is fairly simple for children to use, and has obviously been written by people who know something about maintaining children's interest. The speech is exceptionally clear and used particularly well. Even so, you can turn it off if you wish.

The different screens are all neatly and brightly presented. If there is a young child in your household, why not give their brain cells a challenge? AC

Where to get them

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Carver House
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Tel: (0742) 753423

Lander Software
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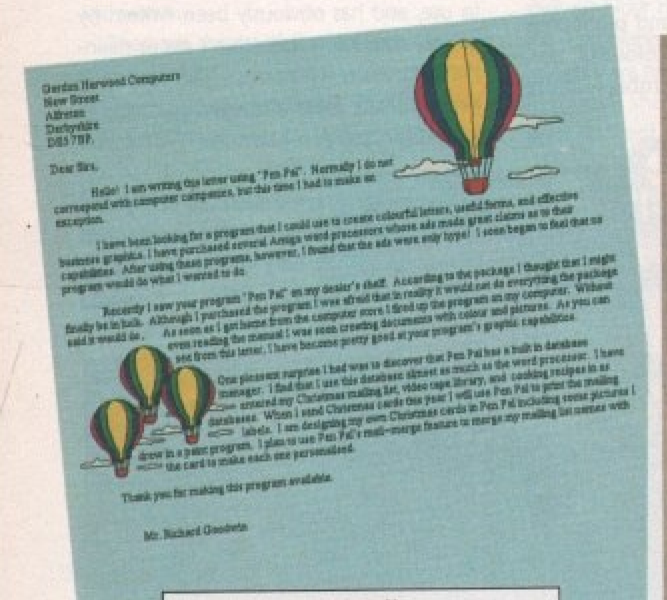
"...I am extremely pleased with your product especially the Graphic Capabilities within the Word Processor. Having the Database on the same disk has made PEN PAL the best program I have..." *D.S.B., Plumstead, LONDON*

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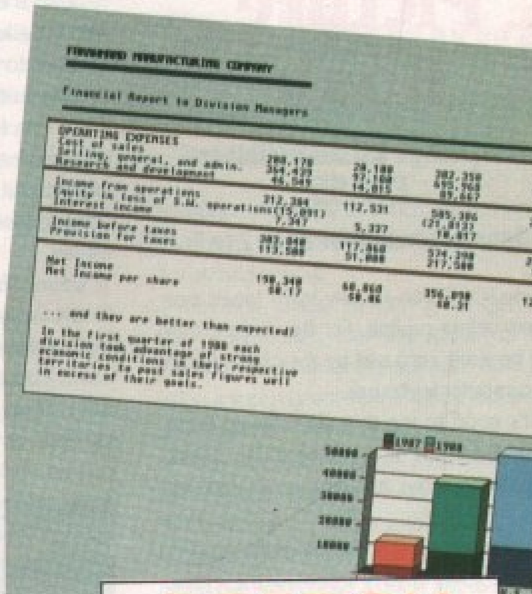
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GraphicStation Support

The TDM tour bus

Stevie Kennedy with the first of a series of features explaining the use of the GraphicStation – order your copy now on page 120

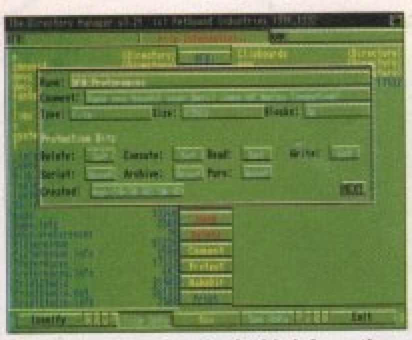
As with the WorkStation disk, where SID formed the backbone of all disk operations, the GraphicStation depends primarily for its supreme ease-of-use on another directory utility, in this case Chris Pettet's excellent TDM (The Directory Manager). With TDM, the user can happily forget CLI and Shell when it comes to a whole host of file and disk management tasks.

Let's start TDM by selecting it on the ShortCut System menu. If ShortCut isn't active you might have to click once with the left mouse button on the small ShortCut window at the top of the screen. Now hold down the right mouse button to reveal the menus. System is the leftmost menu and TDM the first option on it, so highlight and select TDM.

After a bit of decrunching, TDM's friendly colourful display will pop up. This sort of screen should be familiar to anyone who's used a directory utility in the past, but on the assumption that many of you won't have, I'm going to annoy you by going through it one feature at a time (he, he).

The main working area is split into two large windows with a strip of gadgets down the middle. Below this, along the bottom of the screen, there's another strip containing more gadgets for those eager mouse fingers. There are no drop down menus in TDM – everything is accomplished with the left mouse button and the odd visit to the keyboard.

We use the word "gadget" because it sounds less ridiculous than "button', which is really all a gadget is. Now let's start clicking on some gadgets. The first one you should go for is DF0:, which you'll find at the top of the central gadget strip. This and the four other deep blue gadgets are for loading directory listings into whichever of the two large windows is active.



File Info returns a lot of valuable information on your selected file

The active window when you first enter TDM will be the left-hand one, denoted by its sunken 3D look, but you can choose the right-hand window by clicking on it before selecting DF0:. Note that the message window above the gadgets will change from "Ready and waiting" to "Reading directory" just so you don't worry about what the program is doing.

What you'll see in the left window will be a list of all the files and directories on the GraphicStation disk, with directories shown first in bright yellow and files shown last in deep blue to avoid confusion. Now click in the right window to activate it and then click on RAM:.

Now go back to the left-hand window and click on the Preferences program. You'll see a little green arrow appear to the left of the file which marks it as selected. Any file with an arrow beside it in this way will be operated upon by the gadget you choose, but for now we'll concentrate on one file and click the Copy gadget.

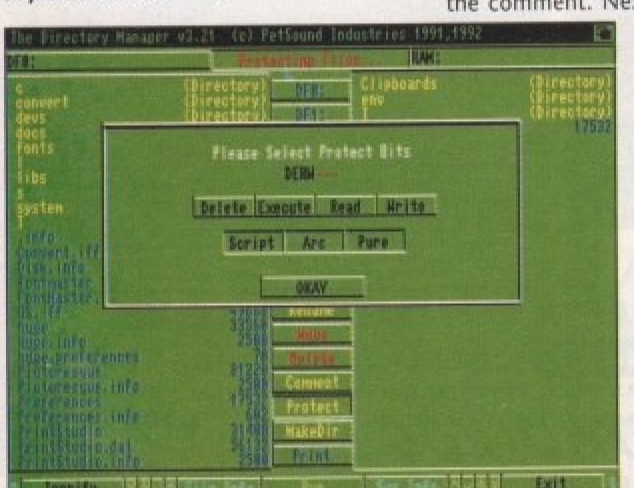
After a quick disk access, Preferences will be copied to the RAM disk, from where we can quite safely muck about with it. First we'll call it "MyFile". To do this, click on Preferences again (the one in the RAM disk) and then on Rename in the central gadget strip. After the shareware message has finished you can type the new name into the dialogue box and click on OKAY to confirm your choice.

Comments

Next we'll add a comment to the file. Comments are saved with the file and can be examined at a later date. They are useful if you've forgotten what a particular file is for, especially if you have a hard drive with files scattered all over the place.

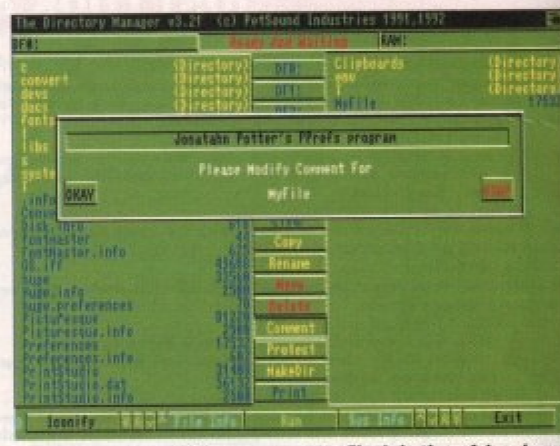
To add a comment, click on MyFile (as it should now be called), then on Comment. As you're reading this column, the answer to the question you should see in the dialogue box will be "Yes, and dashed good value it is too!".

Clear the comment out by pressing Ctrl and X, type in "Jonathan Potter's superb PPrefs program', then click on OKAY to save the comment. Next, as Preferences is a rather important program, you might like to ensure you can never accidentally delete it.



Protect valuable files with TDM's easy-to-use protection panel

Click on MyFile again, then on Protect. This brings up a gadget panel containing information on the file's "protection flags". These are called flags because they can be either "set" (on) or "unset" (off), and tell the Amiga whether it is OK to delete a file, and whether it can be read or written to. At the moment, the top four flags are set, which means preferences can be deleted, read, written to, and executed.



Adding comments to files is both useful and easy

To make it impossible to delete this file, simply click on the Delete gadget and the D will disappear from the list at the top of the panel. If you now click on OKAY, the flags will be permanently altered and MyFile will be impervious to careless mouse clicks.

To test this, try to delete MyFile. TDM will display its usual warning box, but when you click OKAY to go ahead with the deletion, the message window above the central gadget strip will tell you that the file is now protected from deletion, and MyFile will remain in the RAM disk. Neat, eh?

One last operation you can use to garner more information about a file is the File Info gadget on the bottom gadget strip. This is beside the up/down scroll gadgets on the left-hand side, so click on MyFile, then on File Info – you'll see an info panel pop up.

This should tell you the file's name including the directory it is occupying, any comment attached to the file, its size in bytes and blocks, which protection flags are set and unset, and when the file was created. All this information comes from the file "header", which is a sort of ID tag found on all AmigaDOS files.

Finally, and if you really want to stick your trotters in the information trough and have a good long guzzle, you can click on the Sys Info gadget opposite File Info. This brings up a panel showing available memory, split into chip and fast RAM, the current system time, and the number of devices and assigns your machine currently recognises.

For details of exactly what assigns and devices are active, click on one of the gadgets at the bottom of the panel. Assigns, for example, will tell you which default assign there are, such as LIBS: and DEVS:, along with any you've since set up, and the Devices gadget will report on anything that's either automatically mounted (such as DF0:) and anything that's since been mounted, which makes it a good way of checking if MessyDos has been successfully kicked into life.

That's all for this month. You should have enough to be getting on with TDM at the moment.

Next month we'll take a look at configuring TDM using the TDMConED program, and the various additional uses it can be put to, such as editing files, running programs, and so on.

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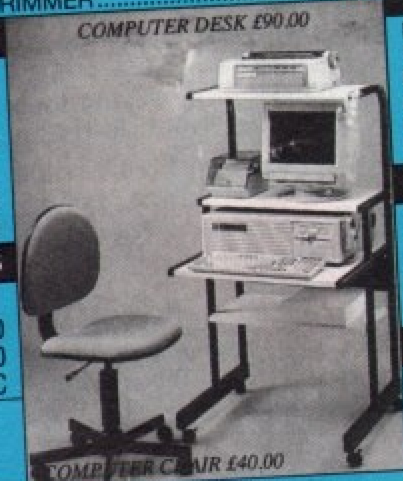
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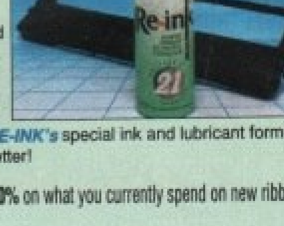
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THE DISK

Tiles and Tettrix



Can you clear a screen in Steve Smith's Dragon Tiles, or retain your composure with Niall Summerville's Tettrix? Test your skills with this month's classic gaming duo!

Dragon Tiles as a game type should be familiar to many. The object is to click on the various tiles, match up two symbols, and clear them away. The trick is to make sure you clear them in the right order, because if you fail to think your way through this deceptively simple game, you're almost certain to be left staring in hopeless fury at a pile of tiles you can't get rid of.

Steve Smith's version of the game is easily the most colourful and eye-catching I've seen on the Amiga. The game however, completely loses any soothing qualities as soon as you start to play. You'll be faced with a set of differently shaped tile mounds to choose from, and believe me they get harder as they go along. To start with, go for the one on the top left of the screen, as even beginners should complete this one after a couple of tries. The screen display will change to a full size image of the tile mound, and the first thing you'll notice is how cleanly and colourfully everything has been designed.Tactically, you should always strive to remove the topmost tiles in order to work your way to the bottom layer in an even manner. This means you have to resist the temptation to go for an easy combination by using a tile on the outside edge of the pile which is on the lowest level. If you succumb to this temptation, you will soon find you've run out of twin tiles.

A tile cannot be removed if both its left and right edges are covered by neighbouring tiles. In situations where a tile is completely surrounded, you have to carefully work your way towards it one tile at a time, and it's here you'll be most pressurised to make reckless use of easily available lower tiles. Try not to!

● Dragon Tiles is a shareware game, so if you like it and intend to play it and keep it, you should send a £5 donation to:

Steve Smith
The Garden Flat
27 Monkton Street
RYDE
PO33 2BY

In return, Steve will send you his version of Othello and the source code for Dragon Tiles.

How to use the Disk

First of all, you must make a backup copy of the CoverDisk. To do this, boot up with your copy of Workbench, then double click on the Workbench disk icon, followed by the Shell or CLI icon. Now type:

DISKCOPY FROM DF0: TO DF0:

or, if you have an extra disk drive, put a blank, formatted disk in DF1: and type:

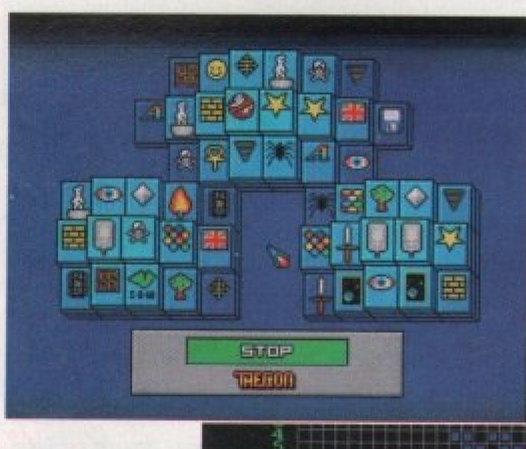
DISKCOPY FROM DF0: TO DF1:

Follow the onscreen prompts until the copying procedure has ended, then put your original disk away in a safe place. Now switch off the machine and wait for 30 seconds before rebooting with the copy. Wait until the CoverDisk icon appears, double click on it and away you go.

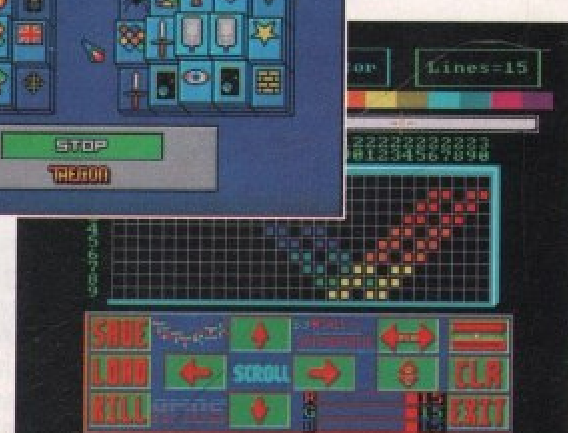
That's all you need do to make a straight copy of the entire disk. However, you may also want to to copy individual programs from your copy of the CoverDisk to a separate disk. In this case ensure that you fully understand which related files need to go with it. For example, all of the document files on the disk require that the text editor PPmore is in the current disk's C: directory. Therefore, if you copy the docs to a new disk you will also have to copy PPmore to the new C: directory before you can read them.Some of the smaller docs will not have been crunched, so for these you need only change the tool types on the icon's info screen to reflect whichever text editor you do have on the new disk.

As a general rule, you should carefully read the documentation for any program you copy from disk to disk.

This can save a great deal of messing about and can help you avoid all those infuriating error messages!



Tiles



Tettrix



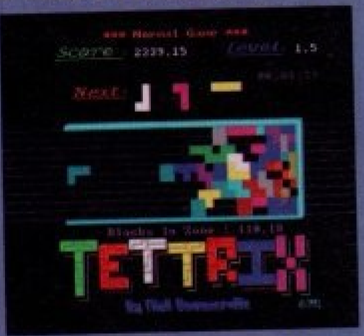
Tettrix

Author: Niall Summerville

Niall's Tettrix game is a version of Tetris™, one of the most popular and addictive computer games of all time. I've never been much of a Tetris fan, but in the course of testing Tettrix for inclusion on the CoverDisk, I've become hopelessly and shamefully enslaved by it. I challenge you not to sink into the same boggle-eyed frenzy every time you play it!

The first novel difference offered by Tettrix over the usual Tetris game is that it throws blocks at you in a horizontal direction, which should confuse Tetris fans used to the more traditional vertical game layout. Apart from that, the game plays in an identical manner to the original and is every bit as obsession-inducing.

To re-orientate a block before placing it on the grid at the right of the screen, click the left mouse button. This will rotate the block and should help you get it into the correct position to fill a gap. When you're happy with the block, pressing the right mouse button will zoom it into position.



Any completely filled line of blocks will disappear accompanied with a sampled "oh yeah!". The object of the game is to keep the box as empty as possible. Once a tower of blocks reaches the extreme left of the screen the game is over and you're treated to an appraisal of your score.

Unlike the original game, and most of the tired-looking clones in the PD market, Tettrix offers a bagful of extra features, including a random game and custom game option, in conjunction with a full level editor.

Random games will present the player with a Tettrix screen already dotted with small blocks, making the game a great deal more difficult to play, but custom games can be designed by the user to his or her tastes.

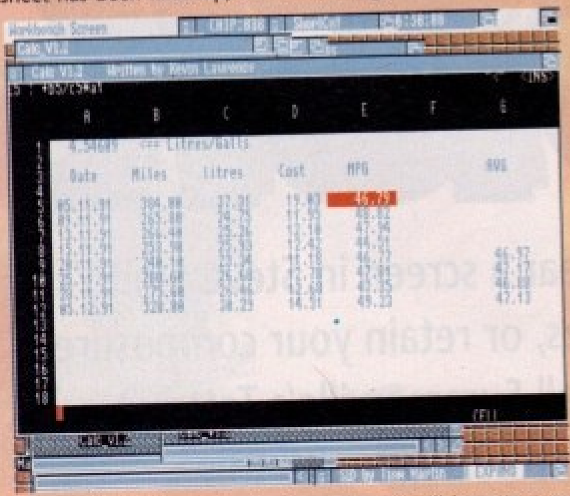
The level editor offers features such as complete control over colour schemes and the number of lines to be completed before the level is over. As it is packed with features and very well documented in Niall's Tettrix.doc file, I'll not go into it in detail here, but if you want to play a Tettrix game that's really yours, check out the on-disk documentation.

Calc v1.2

Author: Kevin Lawrence

Spreadsheets are the second most useful items of general home office software after wordprocessors, and Kevin Lawrence's Calc is ideal for the beginner and seasoned user alike. It combines ease-of-use with a range of powerful features, and can be used for everything from working out the monthly domestic budget to small business accounts.

Like most spreadsheets, it suffers from the initial disadvantage of being visually unimpressive. That's because a spreadsheet is a just large blank area of columns and rows into which the user types his or her figures and calculations. Once the spreadsheet has been filled up, however, things become a bit more interesting, and users with a practical mind will soon find Calc an invaluable tool.



The sample database on the CoverDisk has been designed to keep track of petrol consumption, and takes all the hassle out of the calculations you'd normally plough through in order to gauge how well your car is performing.

Load it up by choosing Load from the Project menu. You'll have to type in the name of the file you're looking for as the current version of Calc unfortunately doesn't support a file requester, so type "examples/petrol.spd" into the data entry cell at the bottom of column A (lower left-hand quarter of Calc's screen), then press Return.

When the file loads you should see a screen containing rows and columns of data. Each individual item of data is a "cell", which is referred to by the name of the column and the number of the row it is in. The top left-hand cell is therefore called A1.

Calculations, as Calc's name suggests, are at the heart of every spreadsheet. For example, all the cells in columns E and G of our petrol spreadsheet are calculation cells which operate on the contents of certain other cells. Using the cursor keys, go to cell E5 and its contents will be displayed in the top left-hand corner of the screen. They should read:

```
+B5/C5*A1
```

which is a calculation of the miles-per-gallon figure reached when you divide miles travelled (B5) by litres used (C5), then multiply it by the number of litres in a gallon (A1).

Spreadsheets can be used to keep a track of stock items, current total value of stock, wages and salaries, bank accounts, almost anything involving the handling of large amounts of numerical data, in fact. There's enough room in Calc's 52 columns for most users and the program could well be the last spreadsheet you'll ever need.

Shareware notice

- Calc v1.2 is a shareware program, so if you like it and intend to use it you should send a £5 shareware donation to:

Kevin Lawrence
32 Highfield Crescent
ABERGAVENNY
NP7 6DA

This will entitle you to free upgrades of Calc, including a planned version with a file requester and other improvements.

SysInfo v2.53

Author: Nic Wilson

SysInfo has for a long time been the best Amiga system information program, and v2.53, with many improvements over earlier incarnations, works with all Amigas, including the 500 Plus and A3000.

The program's function is simple but invaluable. When run it checks your Amiga to see how much memory it has, what type it is, what sort of peripherals you have attached, the type of Agnus chip with which your machine is equipped, and so on.

The main screen has information panels for system software (your Kickstart ROM, intuition libraries and so forth), drives available, memory, and internal hardware. If, for instance, you wanted to know what sort of Agnus chip your machine was fitted with, you'd look in the internal hardware box where Agnus, Denise, and Display types are all listed.

At the bottom of the screen there are buttons for memory, boards, drives, and speed. With the first three of these you can call up much more detailed information on the various devices, but the last one, speed, is of particular interest if you're thinking of buying an accelerator board or already own one.

When this button is clicked on a speed test is carried out to gauge the machine's MIPS (millions of instructions per second) and MFLOPS (millions of floating point operations per second) ratings. These should be treated with caution, as the MIPS count at least seems to be a bit pessimistic. When I tried it on a 68040-equipped B2000, it returned a MIPS count of no more than seven, half as fast as the rating provided by my usual MIPS tester.

This gripe aside, SysInfo is one of those indispensible utilities everyone should have lying around. If you've never poked around inside an Amiga with a screwdriver, now's your chance to do so with impunity, and you won't even need the screwdriver!

DiskTalk

Author: Nico Francois

From the man whose PowerPacker program made it possible to cram over a megabyte onto an 880k floppy comes a utility to play sound samples every time a disk is inserted and removed from the drive.

To run DiskTalk, either select it from the ShortCut menu or double click on its icon. The program will run, load two samples into memory, and appear on your Workbench screen in its own little window to remind you that it's there.

Now eject your CoverDisk and put it back in again. Hear the difference? With the appropriate samples, DiskTalk could be anything from brilliantly funny to downright rude.

You can choose the sample to be played by going to CLI and typing:

```
RUN DISKTALK [IN] [OUT]
```

where [IN] and [OUT] are the full names and pathnames of the samples you'd like to play. You can also set the samples by altering the program's icon tooltypes. This will have to be done from a Workbench disk, as there wasn't enough space on the CoverDisk to include info.library in its LIBS: directory.

Try some of the extra samples in the DiskTalk directory. They might surprise you!



Guru!

Author: Richard Skeen

Guru! is an extremely handy utility which will attempt to explain what the computer means when it gives you a Guru alert and all those incomprehensible numbers.

To use Guru! just take a note of the left-hand eight digit number on your Guru alert, then go to the CLI and type:

```
GURU
```

You will be prompted to enter the number, and then Guru! will tell you what it can about the cause of the alert.

This information will be of more use to programmers than anyone else, but if, for example, you've just bought a new RAM expansion and you start getting Gurus, the program should be able to confirm for you whether the errors are being caused because of a memory problem.

Remember – the more you can find out about what's going on inside your Amiga, the better your chances of figuring out if anything terminal is wrong with it.

Tune of the Month

This month's tune is Breath of Air, by Neil Davis. The song is a mellow piano-based arrangement with skillful variations and a melody you can sit back to.

Shareware update

We must be barking mad! On the February CoverDisk, we brought you The Directory Manager (TDM) and Dictator, two excellent shareware programs. What we neglected to do was print our customary shareware notices for these programs (You're fired – Ed).

If you use and like Dictator, you should send a £5 shareware donation to:

Steven Pugh
5 Overton Close
Sundorne
SHREWSBURY
Shropshire

Steven will then keep you up to date and may send you another of his excellent games.

If you use and like TDM, you should send a £5 shareware donation to:

Chris Pettet
70 Sutton Road
Cowplain
WATERLOOVILLE
PO8 8QA

Think you can do better? Want to be famous?

We are always on the lookout for new, quality Amiga programs for the CoverDisk. If you think you have written something good enough for others to share and enjoy, please send it in and we'll have a look.

The *Amiga Computing* CoverDisk is used by thousands of Amiga owners every month in places all over the world from New Zealand to the USA, so if your submission finds its way onto the disk, you could be famous!

Please make sure you list ALL Workbench and other files necessary for the program to work. Feel free to design your own icons for progs which run from Workbench, but please don't make them too big.

If you ensure your program is as compatible as possible with a wide range of Amigas, it will also stand a better chance of publication. We are especially interested in programs designed to work with the A3000, although if they work only with the new machine they'll have to be quite small.

We are prepared to pay our current rates for original work which hasn't been distributed in any other way and which has not been put in the public domain.

If you wish your program to be released as shareware or freeware we will be happy to publish it, but would, of course, be happier if we'd been given it first!

Your submission MUST be accompanied by the submissions form, a copy of it, or a signed declaration to the same effect. Please supply your full name, address and phone number.

Unfortunately we cannot undertake to return disks sent to us as the volume of submissions makes this an impractical exercise.

Name .... Age..............

Address ....

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Submission name.............................. Submission size..............................

Type of program: Game ☐ Utility ☐ Tune ☐ Other..............................

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Post your submissions WITH A COPY OF THIS FORM to:
Stevie Kennedy, *Amiga Computing*,
CoverDisk Submissions, Europa House,
Adlington Park, MACCLESFIELD SK10 4NP

QFind

Author: Larry Phillips

This program is for hard drive owners only, so if you don't have a hard drive, you won't be able to make use of it. QFind is designed to make searches through hard drives for small well-hidden files much easier than listing the contents of your hard drive or browsing around with SID or TDM.

To use the program, you must first copy it to hard drive and set up a directory you can ASSIGN as FindDB:. Next you run the companion program UPDATEDB, found in the QFind directory. This takes four or five minutes to scan the entire hard drive and build up a picture of what's on it, then it saves the directory picture in FindDB:. When Find is run, it will check the file and look for your selected program there.

It follows that you should run UPDATEDB every so often so that it doesn't become hopelessly out of date, but you shouldn't have to do this more than a couple of times a week unless your hard drive is regularly having a great many files written to it and deleted from it! AC



Faulty Disk?

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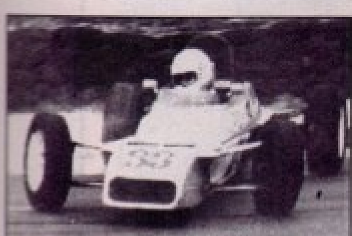




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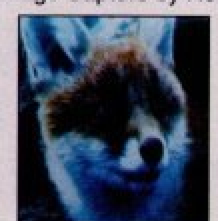


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Paul Austin looks at the latest stylish release from those Scandinavian techno-junkies at Digital Visions

Son of Scala

Anyone who's stumbled across the odd DTV feature or perhaps the associated Almanac column in this magazine can't fail to have heard of Scala – the presentation system that's won the hearts and minds of amateurs and professionals alike.

Scala500's parent program quite literally broke new ground in Amiga-based presentation, in both DTV and as a interactive multimedia system.

Now the creators of this highly acclaimed original have released a video titling variant aimed squarely at the cost-conscious end of the market. Although at first glance both systems appear almost identical, there are some differences which make the possible applications and flexibility of each very different.

Before we delve into the pros and cons of the system, it's worth a closer look at the operation of the program and its impressive array of features in order to set the scene and introduce the uninitiated to what exactly makes it tick.

Like its bigger brother, Scala500 has an excellent interface. As a result, mastering the program is a breeze. After only a few hours of ardent twiddling and tinkering, the manual becomes merely a colourful addition to the bookshelf.

The production process starts with the ever-present slide sorter which allows you to add pages and define at which point each will appear in the sequence, how long it will display – or whether you'd prefer its appearance to be controlled by the mouse. In addition you can define exactly which effect is employed to introduce each page in the sequence.

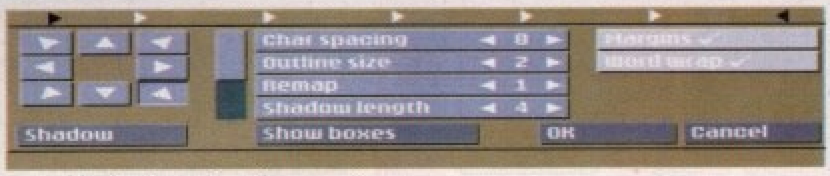
More general options include editing frames individually, viewing a series of selected pages and, of course, the loading and saving of scripts – the format in which all your creations are stored.

Backdrop

At the start of a new project the first task is to open a new page and apply the backdrop of your choice. Once New is selected the program instantly defaults to its background file requester, prompting you to select an appropriate image from the impressive selection. Alternatively you could even create your own backdrops in DPaint. The program accepts either eight colour creations in hi-res or 16 in med-res. All you need do is tell the package where to find them.

Once the background is defined, the program instantly loads the file and defaults to the composition screen which adds a menu bar ready for the addition and stylising of both text and brushes – which again come as part of the package.

While on the subject of text, it's perhaps worth fishing around for a few extra fonts as the program is only supplied with four as standard. Excellent though they are, a regular user will soon find such a small selection very restrictive. Brushes, however, are a different story



Customising brushes and text the easy way...

altogether, with a huge selection of excellently drawn images coming with the package.

As with the backgrounds, brushes can be manufactured externally and added to the selection. Brush handling and styling is perhaps the most impressive aspect of the program. Both manufactured and supplied images can have all the styling additions usually reserved solely for text.

As a result, a brush can boast either 3D or drop shadow in a variety of user-definable directions – outlines, bold italic and underline – with mixed results, plus pre-defined page position.

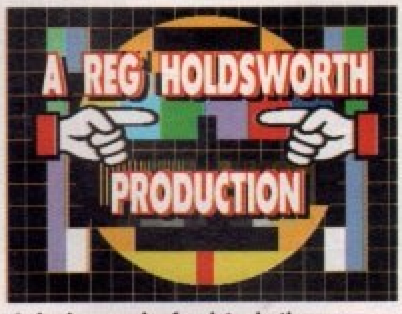
All the elements, text or brushes, can be moved and placed in any position either over or underlaying other elements. All the onscreen components can have their particular effects adjusted individually whether it be 3D or shadow length, outline width and in the case of text, character spacing and so on.

If we assume the new page is now chock-a-block with suitable text and assorted brushes, the next job is to add the whistles and bells which bring the image to life. Just like the application of effects, each line and brush can have its own introduction to page.

Selecting any element followed by the movement icon reveals yet another requester full of assorted introductions. Simply click, select and assign a suitable speed and an optional delay.

Again the selection of intros is impressive, if perhaps a little shorter than that of the original Scala. Nevertheless, it's unlikely that you'll run out of inspiration for a very long time. The intros take two basic formats, either movement versions which slide the element into the page from a pre-defined direction or the second type which reveal the object on the spot via a series of wipes and fades.

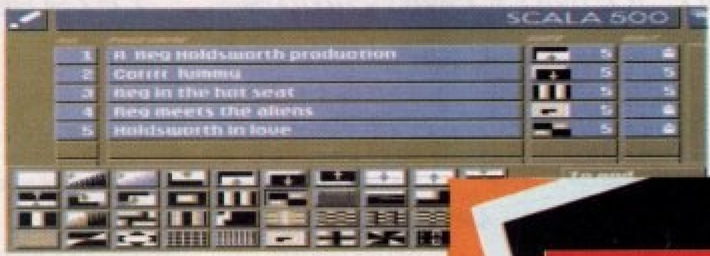
Once all the elements have their intros assigned, it's time to return to the compilation screen and examine your creation via the Show button which runs the particular



A classic example of an introduction screen



The compilation menu, giving access to all the effects you'll ever need



Assign intros to every page in a matter of moments

page in its entirety. If you're not happy with any aspects of the show it can be altered by repeating the intro assign process, or juggled around the screen with the Move option – which offers a handy blanket selection option making the grouping and movement of various elements simplicity itself.

Although Scala500 is the usual Digital Creations classic, there are a few points which detract slightly from its claim to be the ultimate video titling system. Firstly, it doesn't support externally created animations – an option which its bigger brother does.

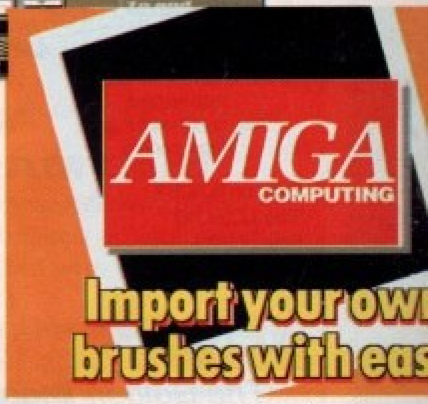
This may seem a rather niggly point, but the inclusion of DPaint anims within Scala does make a significant contribution to the impact of its presentation. Its exclusion is even more surprising considering Scala500's genlocking potential, which if employed properly can leave jaws dangling in amazement.

The second disappointment is the program's inability to employ wrap-around text, an effect employed on just about every TV programme ever created. No doubt because of this omission it's also not possible to load in pre-prepared text.

The lack of wrap-around scrolling, text importation and the inclusion of cartoon-style brushes does give the package a rather light-hearted feel. In other words, if you want to knock out titles for a socially aware, deep and meaningful documentary, Scala500 isn't the ideal choice.

All in all, I think the package speaks for itself. It is easy-to-use, high quality software that provides impressive results which are guaranteed to leave a smile on both your face and those of your audience.

If you're interested, at least 2Mb of extra memory is advisable and, of course, a hard disk is handy if your finances will stretch that far. AC



A DPaint production imported into the action

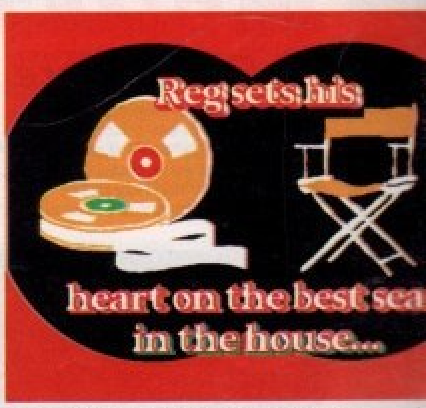
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Ease of use

Output

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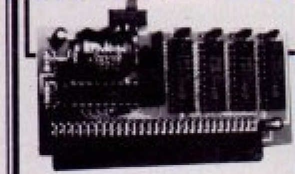
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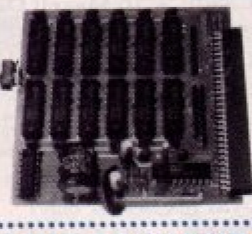
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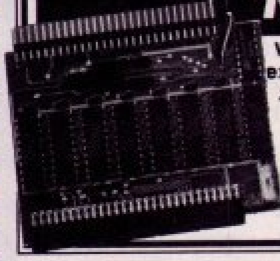
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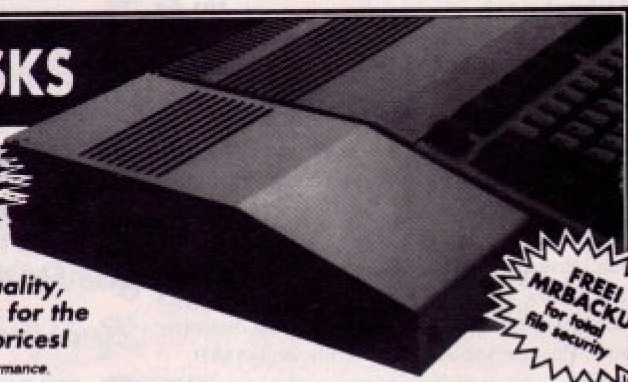
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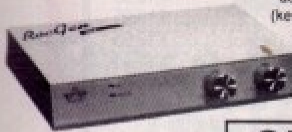


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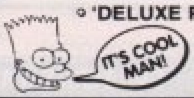
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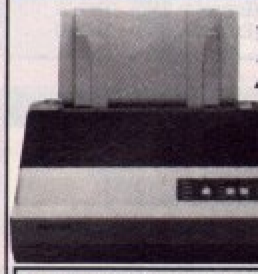
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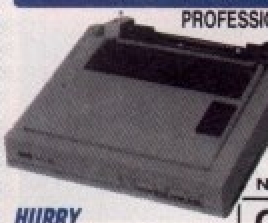
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This month we'll concentrate on the virtual side of the machine's features with a look at a whole range of enhancements for the ever-growing band of ray tracers. To start things off we'll open with the long awaited arrival of Space Fonts, created by RGB software and distributed by those artistic aficionados, Alternative Image.

The ten fonts in the set come in a variety of original styles and cover the entire character set in both upper and lower case. As you can see from the examples, some excellent results are possible, but keep in mind that all the images are 24-bit creations. If you're working with Ham you won't achieve the same quality, but that certainly isn't the fault of the fonts.

The fonts themselves are strictly format specific. In other words, if you use more than one tracer you could face investing twice in the same font – unlikely perhaps, but worth remembering. The slightly faceted look on close up can be reduced with the assistance of RaceTrace which is covered more fully below. On the other hand, you can cheat by adding a bump map to the edge of the font as in the Alternative Image example.

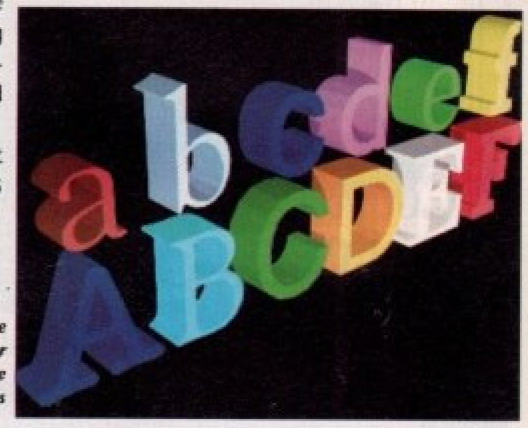
Aside from the one font/one format restriction, the main limiting factor is sure to be the price. Each font retails at a frightening £25, and with the complete collection running to £250 it's sure to put them far beyond the means of the average punter. For the pros they may prove a good investment, simply due to their time saving potential.

Fortunately for we mere financial mortals, there is an alternative. If time isn't your top priority you can do exactly what RBG have done and employ their RaceTrace 2D to 3D conversion program to transform a standard Amiga font into its three-dimensional counterpart.

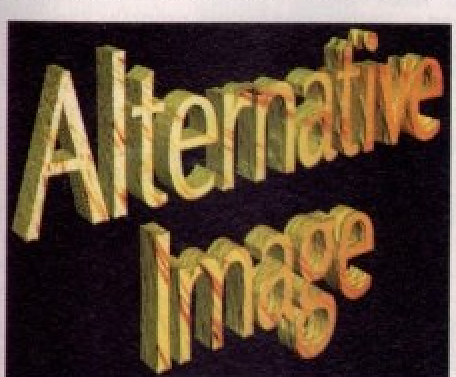
Creating an entire character set will take a long time and it's this very commodity that puts the £25 price tag on each Space Font. RaceTrace will still set you back £99.95, but armed with it you can create as many or as few characters as you require. And of course, RaceTrace isn't limited to fonts – any 2D image can be transformed into a 3D object.

In fact, with the assistance of RaceTrace your own fonts can actually be superior to the commercial alternative, as more time can be spent removing facets within an object – examples of this can be clearly spotted in the close up of the AC image.

For more details contact Alternative Image on 0533 440041 or fax 0533 440650.



A perfect example of Space Fonts in action with both upper and lower case in six of the available font designs



Video trickery in action as the dreaded facets are banished with a bit of bump mapping



A simple image that took seconds to create as opposed to hours of hard labour back in the bad old days



Up close, spotting facets becomes a good deal easier

AMIGA Update

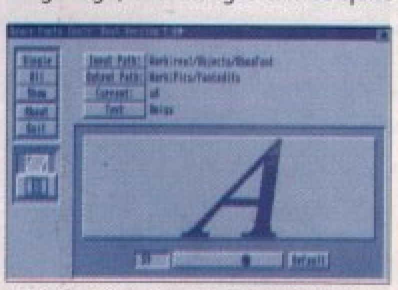
Paul Austin rounds up this month's new selection of graphics and DTP software

Space Font Tools

Continuing in the same three-dimensional vein, RGB software have released another program which may prove to have much more mass market appeal. Space Font Tools is released in conjunction with its namesake to add more flexibility to the new font sets.

Equipped with this £25 utility, the potential of any 3D font – or object come to that – gets an impressive boost. The program operates in two dimensions, a strange concept for a three-dimensional font editor, but it simply means that you're allowed to edit both the x and y co-ordinates whilst the z or depth is left untouched.

As a result, it's possible to add an italic effect and either stretch or shrink the actual height and width of the font. Both effects can be applied simultaneously, and as you can see from the default and edited Amiga logo, the changes can be quite startling. Actually creating the desired font style is simplicity itself. Clicking on either of the two dimension selector toggles between the Italic and Stretch options precedes adding the desired effect via a mouse and slider combination. Alternatively, you can type in the changes directly from the keyboard.



The friendly face of an excellent interface. Space Font Tools in all its simplistic glory

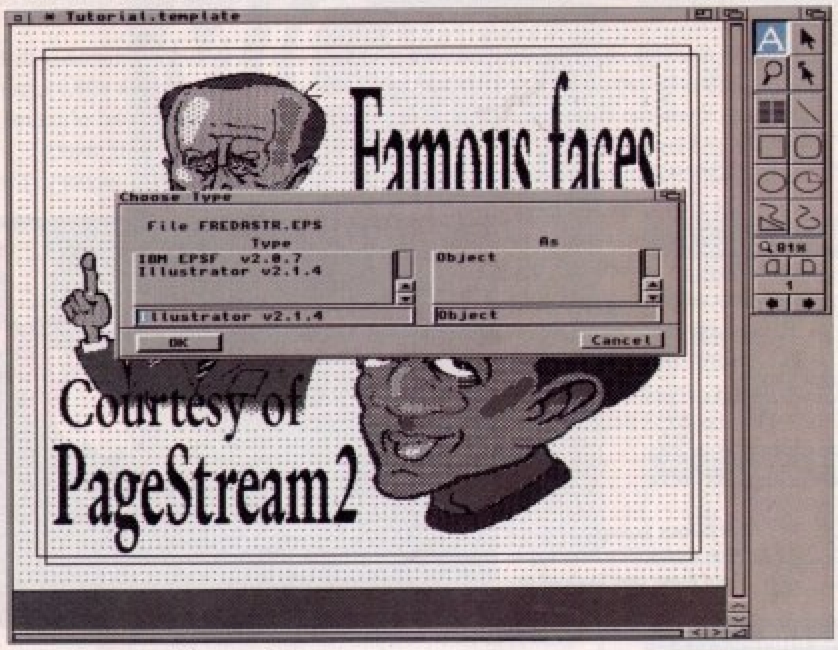
To see what's happening, a standard font is supplied above the slider to give you an idea of what your new font will look like. The letter in question is simply a generic representation to illustrate the applied effects.

To view any character within a font it first needs to be selected as the current letter and viewed via the show icon. The standard font is then immediately replaced by a wireframe representation of the selected character.



An impressive example of just how much difference Space Font Tools can make to a standard font

Obviously processing each character individually would be a tedious process, ➤



The new import modules are a joy to use

TVpaint arrives on the IV-24

After another call to The Amiga Centre Scotland's Martin Lowe, it's been confirmed that an Amiga 24-bit paint package is on its way for the IV-24. The final touches are still being added but Martin already has a prototype of TVpaint v1.6, often regarded as the machine's top paint package, for the board.

It should be with me by the time you read this, so tune in next month for the first look at what the IV-24 has been waiting for.

➤

so RGB have kindly added a number of alternatives. The first is the option to use the same changes applied to the individual across the entire character set, automatically saving the new font to a pre-defined output path.

If you don't need the entire set, a text requester has been added which will process only the component characters with the text – very handy if you're short on disk space.

An added bonus of the package is that it isn't restricted to font editing. Because it works with objects rather than true fonts, the program couldn't care less if the object actually represents a letter or not.

As a result, any object can be loaded into the editor and have its dimensions squashed, stretched and tilted as the fancy takes you. This might not be an everyday need, but it's a useful trick if you want to quickly re-model an existing object.

As with Space Fonts, the accompanying editor comes in a wide variety of formats retailing at a very tempting £25 a time. For more details contact Alternative Image on 0533 440041 or fax 0533 440650.

PageStream 2.2

PageStream has for a long time been ProPage's only serious challenger, and has evolved considerably since its initially disappointing start. The last year alone has seen two upgrades in the form of 2.0 and 2.1, but with 2.2, PageStream seems at last to have come to its full maturity.

The user interface has always been the most annoying aspect of working with PageStream, and it is no surprise that SoftLogik have given it a complete overhaul for this release. Gone are the old-fashioned looking requesters and the intensely irritating refusal to acknowledge double clicks, and in place of all this there is a smooth, attractive, and thoroughly Workbench 2.04 look and feel.

In common with the latest versions of ProPage, PS2.2 has gone for the WB2.0 look like a rat up a drainpipe, leading to the full implementation of radio buttons, standardised file requesters, and a much more consistent and logical approach to requesters in general. The result is that for first time users PS2.2 is a lot easier to come to grips with than its predecessors.

The changes, however, are not merely cosmetic. A host of annoying idiosyncracies, bugs, and omissions have been ironed out or put to rights and several new features added. The most enjoyable and useful of these are the import options and the font conversion utility supplied with the disks.

The Ascii text import module has been improved for greater compatibility with Mac and PC-style Ascii text, there's a new Encapsulated Postscript (EPS) importer with direct support for Adobe Photoshop files, giving the user full access to the masive range of Mac clip art floating around out there, and you can now preview TIFF files before importing them.

In addition, the existing modules have been greatly improved so that there should be none of the problems earlier releases suffered when importing ProDraw clips, for example. With the improvements and new options and the font converter, PageStream is about the most flexible of the current crop of Amiga DTP packages in this respect.



Anything from flyers to newspapers can be created with Pagestream 2.2

Font conversion is simplicity itself. MS-DOS PostScript fonts can be used directly if ported to the Amiga using a CrossDOS type utility, but those used on Macintoshes are in a slightly different format and have previously been unavailable to Amiga owners. As Macs have possibly the largest selection of fonts you're ever likely to find, the inclusion of a font converter to port Mac fonts across to the Amiga for use in PageStream cannot be over-praised.

Converting

To convert a font, simply save it to an AFE disk and get it onto the Amiga using CrossDOS, or port it directly with Mac-2-DOS. Once the font is in memory or on your hard drive, you run the printer fonts file through the converter, which takes just a couple of seconds, and the font is ready to use. You'll still have to buy the fonts of course, but you'll have a great many more to choose from.

Users of high-end HPGL plotters will be pleased to see the introduction of an HPGL driver. This means that PageStream can be used to produce high quality signs, drawings, and precision-plotted output in the form of drawings or complete sign templates when used with the correct plotter/sign cutter. This alone could give the package a whole new market.

HotLinks support is the last major inclusion. This new system aims to provide an idiot-proof rival for ARexx in that any program with HotLinks support can "publish" its IFF or Ascii files and any other compatible program can "subscribe" to the file. When the file is updated, HotLinks automatically updates the file in every other program using a copy of it.

This means you can touch up your DTP graphics from another program or edit a PageStream Ascii file to the correct column length without having to do it in the DTP environment. When the graphic or file is updated, your PageStream page is automatically updated at the same time. We'll be covering this exciting new development in later issues and lining up PS2.2, ProPage 3.0, and Saxon Publisher 1.2 an a DTP battle-of-the-giants, so keep your eyes peeled.

PageStream 2.2 is much more than just a skin job. It is a well-considered and solid improvement over 2.1. Registered users will be receiving their free updates as we go to print. Users of other packages are advised to give PageStream another look. AC

Now for the bad news

If you're regular to the update pages you're probably well aware of the imminent release of G2's Imagic paint package on the IV-24. Unfortunately for IV users the deal has fallen through.

During a conversation with G2's Greg Hollidge, it soon became apparent that G2 don't feel it would be in their interest to support the board.

After eliminating technical difficulties the obvious question was why they felt the need to pull out of the project. After putting this point to Greg it appears that it's purely a matter of speed. As anyone who either owns or has read our review of the IV-24 will know, speed isn't the system's strongest point – especially concerning the rather disappointing Macro paint package.

Apparently the speed problems are caused because of the board's approach to image transfer. Unlike other systems, the IV-24 doesn't supply its output direct to the monitor – first it passes through the onboard flicker fixer which contains a resident library that converts the raw data from the board into a suitable display format. The actual image data is transferred in either four six-bit or eight four-bit blocks.

As a result, processing is significantly slower than other frame buffers, which is the primary reason for some of Macro Paint's idiosyncrasies when updating the screen. According to both Greg Hollidge and The Amiga Centre Scotland's Martin Lowe, the update limitation is unavoidable due to the architecture of the board. As a result, IV users will simply have to console themselves with the rest of the card's built-in abilities.

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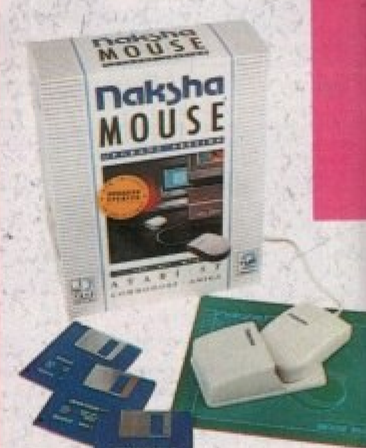
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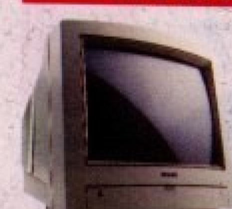
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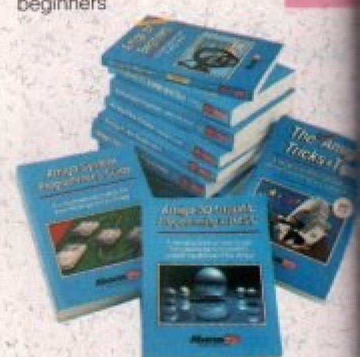
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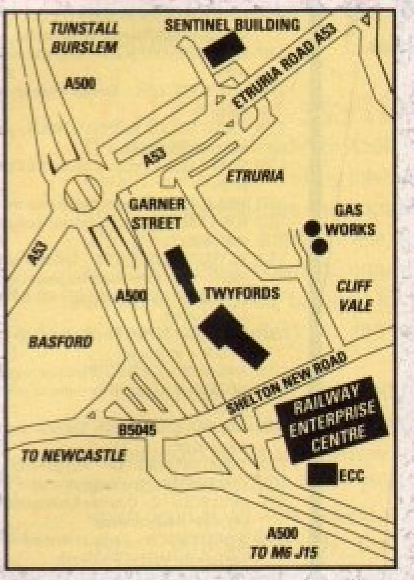
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Plus peripherals

Stevie Kennedy checks out the first add-ons designed specially for Commodore's new A500 Plus

Dogged by software compatibility worries since birth, the A500 Plus has had a troublesome introduction to the UK scene. Now that the worst of the scare is over, however, and the Plus has replaced the older A500s as Commodore's entry level Amiga, many new owners will probably be looking to the future and wondering exactly what hardware will work with the machine.

Plus owners should be aware that most old 512k RAM cards will work perfectly well with the new machine, so for those who'd like a bit of extra memory and have an old expansion card available, or fancy spending just £22 for a cheap half meg card instead of £50 for the new 1Mb units, there's another option. Workbench 2.04 occupies almost 500k in memory, so if you're going to use it for anything other than a bit of tinkering, you'll certainly need at least the extra half meg.



Trapdoor

Fitting any of the available cards is done in the time-honoured fashion of opening the trapdoor, slotting the card in, and closing the trapdoor again. No screwdrivers, no soldering, and no warranty worries. The second rush of peripheral manufacturing took place when companies realised that the new Kickstart ROM was responsible for many of the compatibility problems. The result was the latest version of a device which first appeared with the upgrade from Kickstart 1.2 to Kickstart 1.3.

ROM switchers are simple devices. They constitute a small PCB with space for two Kickstart ROM chips, and a couple of wires leading to a switch. The idea is that you open the Amiga, prise out your Kickstart chip, replace it with the PCB, then plug your 2.04 chip and a 1.3 chip into the PCB. The switch can either dangle out of the machine, or can be fitted by drilling a hole in its plastic case.

Once the Amiga is safely back together, you need only flick the switch to revert to using Kickstart 1.3, and with luck many of your compatibility problems will be solved. This is not Pandora's box, of course, but the ROM switchers used by 1.2 owners who'd upgraded to 1.3 helped to ease the transition back in 1987, and as the devices are now selling like hot cakes, according to one supplier, there's no reason to believe they won't help as much now. The big drawback with switchers is that they require you to open your Amiga to fit them, thus invalidating your warranty.

Many owners of the new A500 Plus will probably put up with a few bits of incompatible software rather than risk this, but as the switchers can just as easily be used by owners of Kickstart 1.3 Amigas, there'll probably be thousands of the things in use fairly shortly.

Users of 1.3 Kickstart Amigas with an eye to fitting a switcher for Kickstart 2.04 compatibility will initially face the problem of ROM availability.

At present, the 2.04 ROMs are in short supply, but for A500 Plus owners there's no such difficulty. 1.3 Kickstart ROMs are easier to come by and should cost about £30. Please note that this is not included in the price of a ROM switcher. On the whole, the third-party peripherals industry has been quick to spot the market for A500 Plus peripherals, and users of the new machine can expect to see redesigned or completely new peripherals appearing in ever-increasing numbers as the Plus gradually becomes the standard in the market.

Unlike peripherals designed to fit inside the Amiga, most external add-ons work perfectly with the A500 Plus. Just about anything which fits in the expansion bus on the Amiga's left-hand side, or in the ports at the machine's rear, will happily continue to function.

All hard drives will work, as will all printers, and we've yet to try a digitiser or hand scanner which has had problems. There may, of course, be a few out there with software which is incompatible with the Plus, but as solving such problems is a simple matter of releasing a new version of the software, any hitches which exist should already have been sorted out by the manufacturers. AC

Product information

1Mb RAM cards are available from the following suppliers:

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Internal strife

The hardware downside for A500 Plus owners is that a great many internally-fitting peripherals are incompatible with the machine. Some of these, such as the KCS Powerboard PC emulator, are being redesigned, but most for the moment are useless on the new Amiga.

The reasons for this are varied, but can mainly be put down to an altered motherboard layout and the new chips such as Kickstart 2.04 ROM. Products which don't as yet work include all old-style 1.5Mb RAM cards, the ICD AdRam card, and some accelerator cards which physically don't fit because of different sized components.

Plus owners should follow a simple rule of thumb and assume that all internal devices are incompatible unless the advertising or packaging explicitly states otherwise. If in doubt, you should always phone and check with the suppliers. Don't buy a peripheral by mail order or from an unknowledgeable sales assistant if no such assurances are forthcoming.

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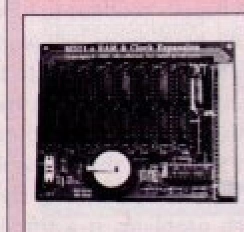
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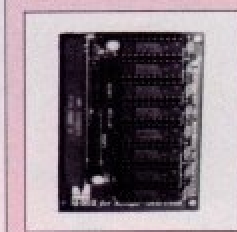
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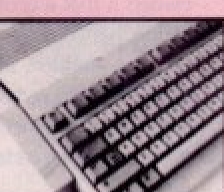


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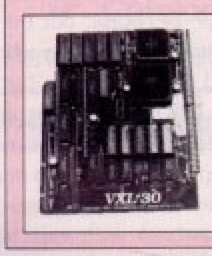
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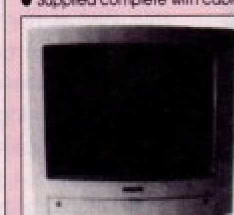
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ABSOLUTE beginners

PART TWO

Stevie Kennedy looks at what makes an Amiga disk tick

After last month's quick tour of Workbench and its pull-down menus, even the most timid beginner should by now be comfortable with his or her mouse and should feel up to a little exploring. If you happen to own a 500 Plus this has, fortunately, never been easier.

Cast your mind back to the Workbench 2.04 Window menu, and the last option hidden away at the bottom. This is the "View By" feature, and we're going to use it to have a peek inside the Workbench disk and see what's going on. If you have an older Amiga, double click on the Shell icon and type:

```
DIR SYS:
```

to get a directory listing of everything in the main disk (or "root") directory.

A500 Plus owners should double click on the Workbench disk icon, then select View By/Name.

For the moment, you'll only see those files which originally had icons attached, such as the prefs drawer. To see all those hidden drawers which don't normally appear in a window, select Show/All Files. At this point, Workbench 1.3 owners should type LIST and press Return.

Now before you stare in bewilderment at all the extra data you've suddenly got onscreen, take a look at just one file. Each has a line of its own containing basic information about the file, none of which should be confusing at this point.

First there's the file's name, then there's its size in bytes or the word "Drawer" if the entry is for a directory. Next the file's protection flags – which we'll discuss later – are displayed, and the date and time the file was created or last altered. Simple, really.

If you want to go further and look into a directory, double click on its name in the entry line and a new window will open with the directory's contents displayed the same way as the window you've just left. This is an ideal opportunity for A500 Plus owners to examine areas previously accessible only by using Shell.

Try double clicking on the C directory. Owners of older Amigas will have to type:

```
LIST C:
```

for a similar effect. What Workbench 1.3 users will definitely miss is the ability to double-click on an executable file – such as C: commands – to call up the Execute Command requester.

For example, double clicking on Run will bring up an Execute Command dialogue box and prompt you to finish off the command line by typing the name and path of the program you'd like to execute. This is by no means the easiest method of running a program, but it is a good example of the sort of flexibility offered by Workbench 2.04.

You could quite happily go on clicking on directories and looking at files from Workbench if you never intend to go further into your Amiga than the length of a mouse cable, but it's time to join all those Workbench 1.3 owners and roll up our sleeves with a visit to Shell.

Change your display back to normal with the View By/Icon option, then double click on the Shell icon.

A window will open with the title "AmigaShell" and you will be faced with a "prompt". The prompt is usually a short line containing the number of the shell process window – in this case it should be 1 – and the directory you are presently working in. This should read "Workbench" and the version number (1.3 or 2.04). Finally, there will be a colon, an arrow, and a cursor.

In case you're unfamiliar with the term, a cursor is the indicator used to show where you will start to enter text. They crop up in most programs which expect keyboard input.

OK, time to start using Shell. This is where the real action takes place, and most programmers will never use Workbench at all, sticking to Shell for all their input and output. To catch up with Workbench 1.3 owners, type the command:

```
LIST SYS:
```

and you should see a display very much like the one you saw when the Workbench window files were viewed by name.

There's the file-name, size in bytes or "Dir" if it's a directory, protection flags, and time/date "stamps". The term "datestamp" is given to the information attached to each file showing when it was first created or last altered, and can be found on every Amiga file.

It is automatically appended to every file, and you won't need to worry about it until you reach a fairly advanced level with AmigaDOS.

You've now used one of the most useful AmigaDOS commands you're ever likely to come across. The LIST command, as we've just witnessed, tells us a great deal more about the contents of a directory than DIR, which we started with last month. It's the only quick method for finding out how large a file is and what its protection flags are – without it life would be a lot more difficult.

You may not have been able to catch the entire list of your system disk the first time round if your Shell window was too small to hold it all. Workbench 2.04 users can drag the shell window to full size in which case the list will scroll back down to fill the screen, but Workbench 1.3 users will have to expand the window to its full size and type the command again.

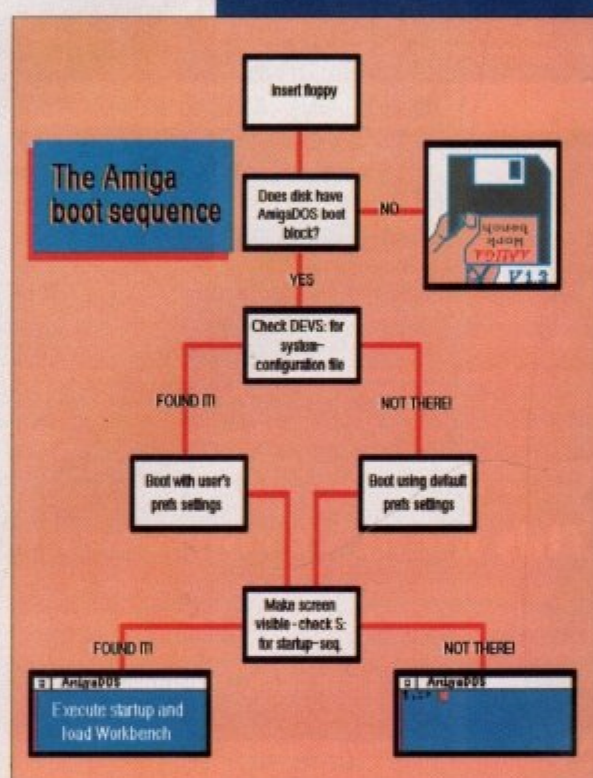
Do this and carefully examine the list of directories. You will notice all those visible on the Workbench screen, such as Prefs and Utilities which have drawer icons, but there will be a number of directories ➤



Information and List can together give you a lot of information on the state of your disks



Note that the friendly View by/Name option works as well as the List command



A simplified chart of your floppy drive's boot up system

This month's jargon

Boot block

The boot block is where the Amiga looks first to decide whether or not a disk is of the correct type. If the boot block says "Yes! I'm and AmigaDOS disk", the startup-sequence is executed.

Startup-sequence

A text file in the S: directory containing AmigaDOS commands such as SETPATCH which determine how the disk will boot up. No AmigaDOS disk will boot up without a startup-sequence.

Shell-startup

A file in the S: directory containing commands which determine how the Shell will open.

Datestamp

The date and time a file was created or last altered. The datestamp is automatically appended to a file, so you need never bother yourself with it. Datestamps can be examined using the LIST command.

ABSOLUTE beginners

➤ you'll never have seen before. These are the system directories, and they are the heart of your Workbench disk.

The five directories you should take most note of are C, DEVS, L, LIBS, and S. These are usually written with a colon (C:, DEVS:, and so on) because if they are on the disk you booted from, the Amiga automatically designates them as "logical devices".

A logical device is treated a bit like a floppy drive in that you can go to it no matter which directory you are in. For example, if you are in the Utilities/Tools/Virus_Killers directory, you wouldn't have to type:

```
CD DF0:S
```

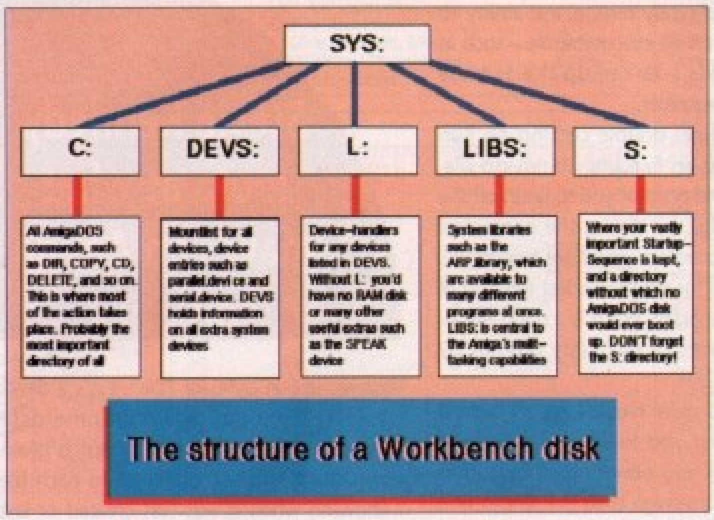
You'd just type:

```
CD S:
```

as the Amiga knows that S: means the S directory on the system disk. The same goes for DEVS, L, LIBS, and C.

Why are the system directories so important? Well, without at least an S: directory, an AmigaDOS disk would never boot up, and without the others it would be able to do precious little once it had. Let's go through them one at a time, using LIST and the directory name to call up a list of the files they contain.

The C: directory contains most of the commands you use to control the Amiga. It is where DIR and LIST reside, and it is the first place the Amiga looks for a command when you type it in through the Shell. C: doesn't contain anything more mysterious than this, but by its nature it is probably the most important and heavily used directory on any AmigaDOS disk.



Most autobooting AmigaDOS disks will have a structure like this

The DEVS: directory serves several functions. The first time it is used in a boot up is when the Amiga looks in it for a small file called "system-configuration". This is a small (232 bytes) file containing information on the palette, pointer shape, and other information set in the preferences section. If you ever need to copy the preferences settings across from one disk to another, this is the file you'd transfer.

Next, DEVS: usually contains two subdirectories called "Printers" and "Keymaps". The Printers directory contains any printer drivers which will be made available to programs running under Workbench, and the Keymaps directory contains special maps of the keyboard which can be used to enable character sets such as Norwegian.

Finally, there are a number of files with the suffix ".device". These are important files which control access to the various Amiga "devices" such as the printer.device. For example, if printer.device was not present, no AmigaDOS program would be able to use your printer.

Our next stop is in the L: directory. Here you will find "device handlers" which complement many of the devices already contained in DEVS:, plus a few specific system files. The most commonly found file in the L: directory is the disk-validator.

As its name suggests, this file will look at a disk when it is inserted in a drive and validate it for writing. You'll also find the port-handler, which handles traffic to and from the serial and parallel printer ports, and the RAM-handler, without which there would be no RAM disk.

The LIBS: directory is a bit of a monster. Central to the Amiga's multitasking nature is its ability to allow several programs to use a system resource at the same time. Libraries are the most important players in this task sharing game, and the LIBS: directory contains all those not built in to the Kickstart ROM. Info.library, for instance, is the library routine which calls up the icon information panel on your Workbench screen.

Last, and by no means least, the S: directory is where it all starts. When an AmigaDOS disk is booted up, the Amiga will check the boot block to make sure you have inserted an Amiga disk, then look in DEVS: for your preferences settings (in the system-configuration file).

It will then go to the S: directory in search of a file called "startup-sequence". This file is just a text file containing a list of AmigaDOS commands which are executed one after another until boot-up is complete.



Leave Out can make life easier by putting programs at your fingertips

Similar to startup-sequence is a file called "Shell-startup", which contains a list of commands to be executed whenever you open a new Shell window. If, for example, you wanted the Shell to open with RAM: as the current directory, you'd include the command:

```
CD RAM:
```

just before the end of the file.

Depending on which programs you install on your disk, S: will also contain specific startup sequences, configuration files, and so on, but you needn't worry about these as most programs install their own special files automatically.

So much for the system drawers. You won't know how best to manipulate the contents of these directories at the moment, but I always feel more comfortable with a piece of machinery if I've got an idea what's going on inside it, and the Amiga is no exception.

Try to remember what these drawers are and retain a general idea of their contents, and you will be more able to cope when the Amiga next pops its clogs for some reason.

For example, if you inserted a disk and it stopped half way through its boot up with the comment "Unknown command SETPATCH", you'd know that the SETPATCH command wasn't in the C: directory where it should be.

If you tried to print a document and the Amiga said "can't open printer.device", you could confidently copy printer.device from the DEVS directory of your Workbench disk to the disk you were working from.

On the other hand, if all you got was a prompt and the disk seemed to make no effort at booting up, you'd immediately think to look in its S: directory to check if there was a startup-sequence.

Sweeping

This has been a fairly sweeping introduction to AmigaDOS and the structure of a Workbench disk (or any other AmigaDOS disk which auto-boots). However, you should by now have a reasonable appreciation of the complexity of the subject we're diving into, and will be better armed to approach an Amiga which is running something other than a game.

As the series goes on, we'll build from this foundation to explain more fully the workings of the Amiga, but for now play around with your copy of Workbench until you feel thoroughly comfortable with its structure and contents.

Next month, we'll look at how to construct an auto-booting system disk from the ground up. If you need some extra guidance, I would recommend Bruce Smith and Mark Smiddy's *Mastering AmigaDOS*, which comes in two volumes and can be bought form Bruce Smith Books on 0727 41243. AC

Handy tips

Try opening Shell and typing:

```
INFO
```

This command will tell you what disks are presently in your drive(s), how much space there is left on them, and what read/write errors they have, if any. A nice easy way of checking your disks for data storage room.

You can avoid a lot of clicking and waiting if you use the "Leave Out" option on the icons window (Workbench 2.04 only). Just click on the icon, select Leave Out, and the icon will appear on your Workbench screen every time you boot up the disk.

This saves a great deal of opening directories and is very useful if you have certain programs you run all the time.

This month's commands

Just one this month, but one of the most important. LIST will give you the contents of every file in a particular directory, including its size, protection flags, and datestamp. To see a list of all the files in a disk, you would use the ALL option. Try typing:

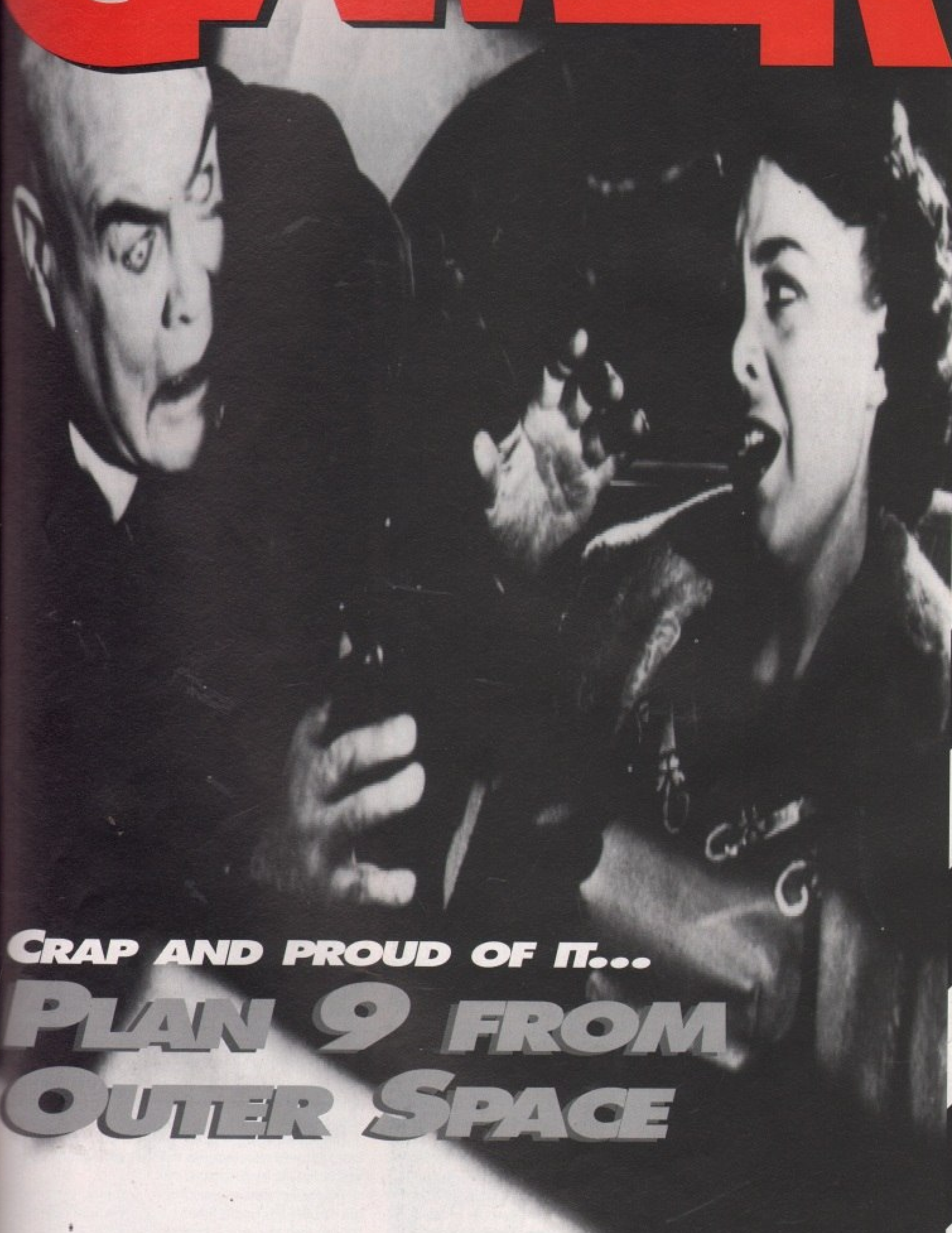
```
LIST SYS: ALL
```

and sit back for a couple of minutes. I bet you never knew how much there was in it!

WELCOME TO THE CHEAP SEATS...
ISSUE SEVEN - APRIL 1992

GAMER

..THE UNSTOPPABLE GAMES MACHINE..



CRAP AND PROUD OF IT...

PLAN 9 FROM OUTER SPACE

Pos-3

ONword

What's going to be in your disk drive soon? Read on...

A game of two 'alves, Brian

Not only have Domark got the rather succulent Shadowlands up their collective sleeves, but they've also got a footy management game ready for kick off.

Yeh, I know footy management games are about as trendy as Abba, but this one looks like it could have everything a budding footy fanatic could ever need.

The result of seven years' hard slog by a hardy bunch of die hard footy fans, it should be the definitive footy strategy game. It should be ready for a March release, price TBA.

Wolf in space?



Ocean certainly aren't going to be slacking after their highly successful Christmas run, with WWF, RoboCop 3 and The Simpsons holding the top three places in the charts over the merry yule-tide period.

They're already limbering up to spring Space Gun on you, the ever-adoring software buying public. It's a conversion of Taito's hit coin-op, and for those who've been unfortunate enough to have missed it, it's best described as Operation Wolf with an Aliens scenario. And rather good it is too.



It's being converted by the same team who cruelly inflicted Beast Busters on us last year. Luckily, Space Gun plays a lot better than Beast Busters, at least if early demo versions are anything to go by. It's faster and smoother, and the whole thing looks a lot more slick.

There are plenty of gruesome exploding aliens, and some quite nifty extra weapons to boot. It all looks quite nice and it should be coming to earth within a month or two, at the usual £25.99.

The heat is on

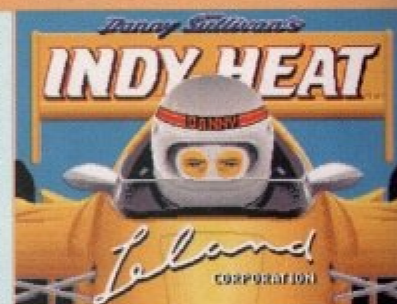
Cast your minds back. Way, way back. Do you remember an arcade machine called Super Sprint? More to the point, do you remember the home computer version by Activision? Crap, wasn't it?

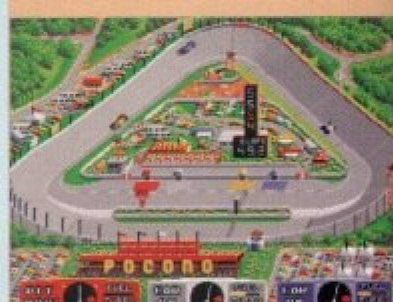
Now come forward a bit, to only a wee while ago. Do you remember an arcade machine called Ivan "Iron Man" Stewart's Super Off-Road Racer? Let's face it, with a name like that you'd be hard pushed to forget it. And do you remember the home computer version? That was a bit crap as well, wasn't it?

Well, let's hope it's third time lucky for Storm, who've managed to get hold of Indy Heat, the sequel to Ivan "Iron Man" Stewart's Super Off-Road Racer. I think you'll agree that Indy Heat is a much snappier title than Ivan "Iron Man" Stewart's Super Off-Road Racer 2.

Like its two predecessors, it's a driving game where you control a really tiny car which zips around a track smashing into other cars at the prod of a joystick. Hopefully, it should be a lot better than those that went before it, as well. Biff's playing the demo even as I write, and his verdict is that it's "alright".

Indy Heat's three-player action, sponsored by some bloke called Danny Sullivan, comes out at the end of February and should cost a paltry £19.99.



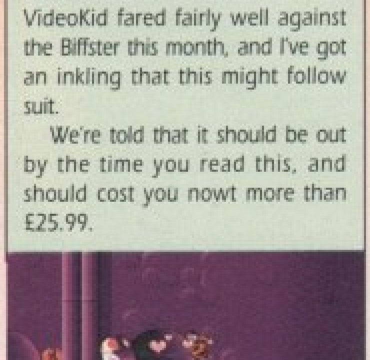


Love and peace platform romp

Poor old Harlequin. His normally sweet and sickly existence has been all chundered up by some evil bloke. So he leaps from platform to platform and shoots the baddies with love hearts. Aaaaah.

This time the platform action comes from Gremlin, whose VideoKid fared fairly well against the Biffster this month, and I've got an inkling that this might follow suit.

We're told that it should be out by the time you read this, and should cost you nowt more than £25.99.



Motorbikes and violence at Palace?

Fergie and Di in Hell's Angel street fight scandal? Sadly not, it's merely a sensationalist headline to link into Palace Software's two forthcoming nuggets of glee.

First of all let's deal with Hot Rubber. Yes, yes, OK so it's a title that just begs for hundreds of fnarrs and ooooers and other such childish gibberings, but I'd like to think that we're above that sort of humour.

So, Hot Rubber (fnaaaaaarr, ooooooeer, blimey missus!), is a motorbike racing game. We can't tell you what it plays like, even though Palace did try and influence us with a rather fruity publicity picture, but it looks a bit of alright. The game that is. Pervs.

It'll feature a two-player mode, 12 international circuits and all the usual gubbins that you'd associate with a motorbike racing game. Should be worth a look. And slightly less prominent in the innuendo stakes is the rather more sensibly titled Hostile Breed. A shoot-'em-up with a difference, or so Palace would have us believe.

You hop into your eponymous little spaceship and have to prevent aliens from infesting a space station. The difference is that there are no naturally progressing levels. You've got free run of the station and it's up to you to get to where the action is and make best use of the inbuilt defences and a team of robots.

This little nougatty twist of strategy should give Hostile Breed a little bit more lastability than your average blaster, so we'll be looking forward to that then.

Hot Rubber (fnaaaaar, ooooooer, kyak kyak, waheeeyl!) will cost £25.99. Hostile Breed hasn't got a fixed price yet, but they both should be out sometime in March.

A good Rogering

Just too late to be reviewed in this ish, Infogrames sent us the first arcade game from their Disney licence deal. Hare Raising Havoc is, believe it or not, based on the exploits of one Mr Roger Rabbit. No Bob Hoskins though.

You control the eponymous long-eared buffoon and must guide him through several stages of high quality cartoon action to return Baby Herman to the house before Mommy gets home.

The graphics and sound are truly incredible, absolutely blowing the poop out of the Don Bluth stuff. Unfortunately, the price you pay for this is that it will only run off a hard drive, preferrably with more than two megabytes. A bit of a blow for those of you who are still floppy, but for the richer among you it should be one to show off to your mates.

Hare Raising Havoc costs a surprisingly low £25.99, full



Crumbly moves into Gamer shocker

Ladies and gentlemen, boys and girls, please welcome a new addition to the Gamer "posse".



Name: Darren Evans
Aliases: Daz E, Dr Creamcheese and his Yodelling Eggplant
Age: A youthful 28
Speciality: Solving games, flight sims, balancing insects, finger painting
Distinguishing Marks: Pony-tail, Zimmer frame, pension book
Motto: Many ring binders do not make a stout meal for three

Win a gorgeous fashion item!

Just look at this quality piece of headgear. It's absolutely beautiful isn't it? An absolute sensation. And it could be yours. Yes! This unique piece of fashion history can be yours for next to no effort at all.

How? Here's how! Simply get a picture of a famous person. Anyone'll do, but any entries featuring Harry Secombe will get thrown straight in the bin. Now simply cut out a picture of a hat from a catalogue or some such style bible, and glue it onto your celebrity's head. The exclusive Gamer headgear will go to the one we find the most humorous. And we'll probably chuck in a game or two as well. And perhaps some crisps.



Send your zany hat collages to Crap Gamer Hat Compo at the usual address, and we'll pick a winner if and when we get around to it.

GAMER

INNER VISION

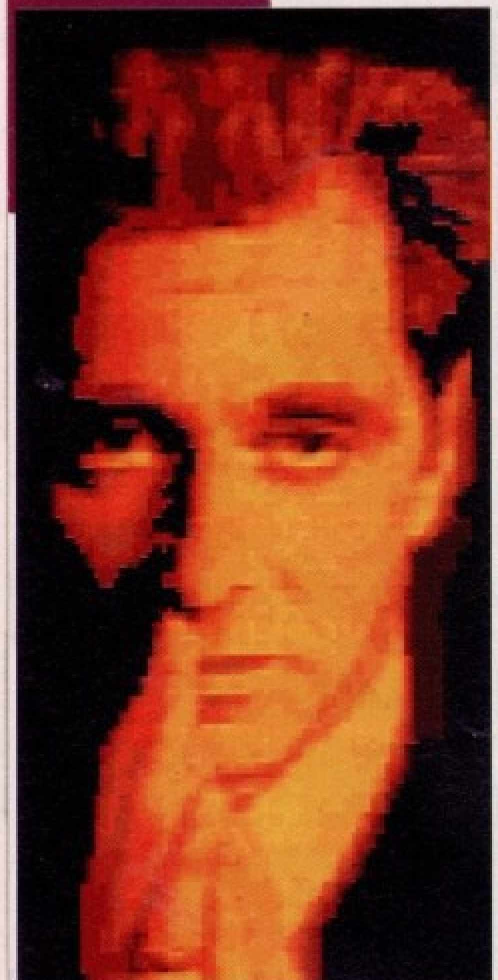
You would not believe what's going on in here...

REVIEWS

REGULARS



Godfather, a cinematic epic, is brought to your home computer screen by US Gold and the letters "D" and "L". Only being a mere youngster of 17, I haven't actually seen any of the Godfather movies except a few bits of the first one that was on TV a while ago.



All I can remember were the gory bits like the horse's-head-in-the-bed scene and people being blown to pieces. All the rest was boring for me, as it involved Marlon Brando mumbling a lot.

However, what with the Gamer office being a certain Aladdin's cave of all things worth knowing, I can tap in to our wondrous spring of knowledge and fill you in, as they say. The Godfather films (for there are three) are about the rise to power of the Corleone family through the Mafia between 1901 and 1979 – an epic saga of love, honour, justice and death (Gosh how dramatic – Ed).

Godfather 1 begins in 1945 at the marriage of Vito's daughter. Vito is Don Corleone, the head of one of New York's ruling Mafia families, and his three sons are also involved in the family "business".

When Don Vito is critically wounded in a brutal assassination attempt following the death of his eldest son, Don Vito's third son Michael Corleone becomes more prominent in preparation for his future role as Don Vito's successor, and the film ends in 1955 with Michael as the new Godfather.

Godfather 2 starts with Michael, the new Don Corleone, moving the family business to Nevada. They have expanded into hotels and casinos, and the family live in a huge mansion by Lake Tahoe.

But all is not well. Michael's marriage is failing and his disloyal brother Fredo is persuaded to become involved in a plot to assassinate him. Mama Corleone dies at the family home bringing the remaining family members closer together.

The naughty traitor Fredo returns to the home, but he's a bit late. Michael cannot forgive his terrible brother, goes a bit wibble and kills him.

In the third and final part of the saga, which begins in New York in 1979, Michael is striving to legitimise all his business operations, becoming involved in real estate, banking and Wall Street.

He is then honoured by the Catholic church with the order of St Sebastian... Hold on a second, I thought the Godfather was about the Mafia who wander the streets killing, pilfering and generally being a bit hard! What went wrong? Oh well, I suppose I'd better carry on.

To complicate the plot slightly, you meet Vincent Mancini, the illegitimate son of Michael's brother Sonny, and urged by his sister Connie, Michael invites Vincent to observe the way the family business is conducted. Michael must determine whether the hot-hea[d] Vincent is able to adapt to the legi[ti]mate world of business. The dilemma they both share is whether they ca[n] succeed in leaving behind the violenc[e] of their past.

The big question now is – how d[id] US Gold make a brill computer gam[e] out of an epic saga of films that spa[n] 80 years? Oh come on, it's easy – yo[u] make a five level scrolly shoot-'em-up. A terrific interactive adventure/actio[n] game might be a better idea, but the[re] you go. You've got a shoot-'em-up an[d] you're flippin' well going to like it.

The first thing that hits you in th[e] face like a big, slimy, seaweed-covere[d] fish is the graphics. Corrrr, well sex[y,] breathtaking, fantastic and erm, that['s] it.

The intro is very good indeed an[d] contains spinning newspapers wit[h] headlines about the Mafia. You ar[e] then treated to a wonderful paralla[x] scrolling view of New York – quit[e] mega.

What about the game? Well the bes[t] way I can describe it is as a Roboco[p] (the first one) clone with utterly brillian[t] graphics.

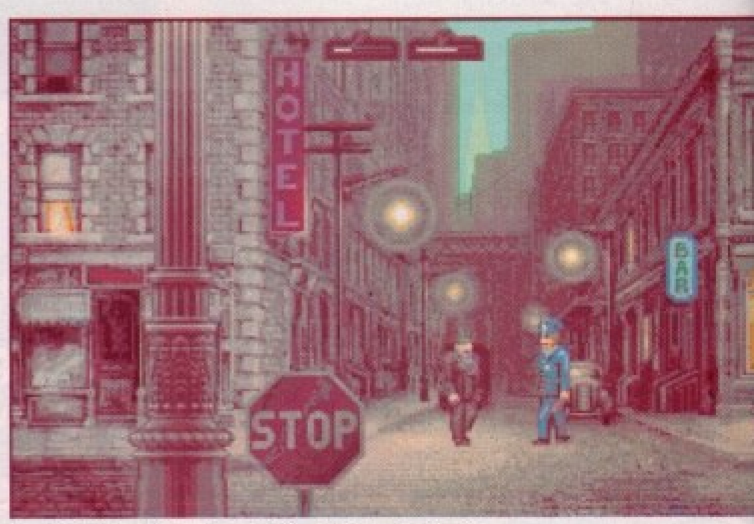
You play whichever character hap[pens] to be Don Corleone in each tim[e] period, and your mission is fairly sim[ple]. All you have to do is blow the cra[p] out of anyone who seems dangerou[s] which is just about everyone. The onl[y] people you can't hit are the passers-by like the woman pushing a pram an[d] the policeman. If you do, you'll be di[s]...



Corrr, ooer missus, will you just look at those sexy graphics



Read all about it, Godfather in crap game shocker!



Evenin' Officer, it's a nice night for killing and pilfering

GODFATHER

US GOLD ▪ £29.99 ▪ ½ meg ▪ Joystick ▪ Out now



Win a million pounds and play Spot the Godfather...





Don takes to the skies – well, the roof, anyway

VISION
G G G G G
This game has some of the best graphics ever seen on the Amiga. Quite stunning.

AUDIO
G G G
Suitable tune with adequate sound FX. The sound doesn't add any atmosphere to the game.

PLAYABILITY
G
Pah, don't make me laugh. The difficulty level's set way too high.

ADDICTION
G
No, no no no no no no addiction here. Yet another boring film licence.

40%

owned by the Corleone family and then it's game over.

The game has a sort of 3D view with lamp-posts and other objects very close up to screen, giving it depth. In theory this sounds excellent, but in practice it doesn't work at all.

For instance, you have four people shooting at you, their bullets are merely white speckles, and then suddenly you are hidden from view by a lamp-post and consequently get shot to bits.

You can get energy back from first-aid kits which lie dotted around the screen but they only give you a tiny, tiny, tiny (and I mean tiny) bit. There are other icons too, but I haven't a clue what they are. This is all thanks to the low quality manual. To be honest, the actual instructions it contains could have been written on the back of a stamp.

You wander the streets until you meet up with a rogue with a machine gun. By the time you reach this point you've hardly any energy left and he just tends to blow you away. He soaks up bullets like there's no tomorrow, but when you have shot him enough times he buggers off. To say the Godfather is hard is the biggest understatement of the century. Blimey, when Gamer finally managed to get off level one and reached the supposedly ace Operation Wolf-type sub-game, we found out that your energy level stays the same and thus immediately died. To say we were most miffed is the second biggest understatement of the century.

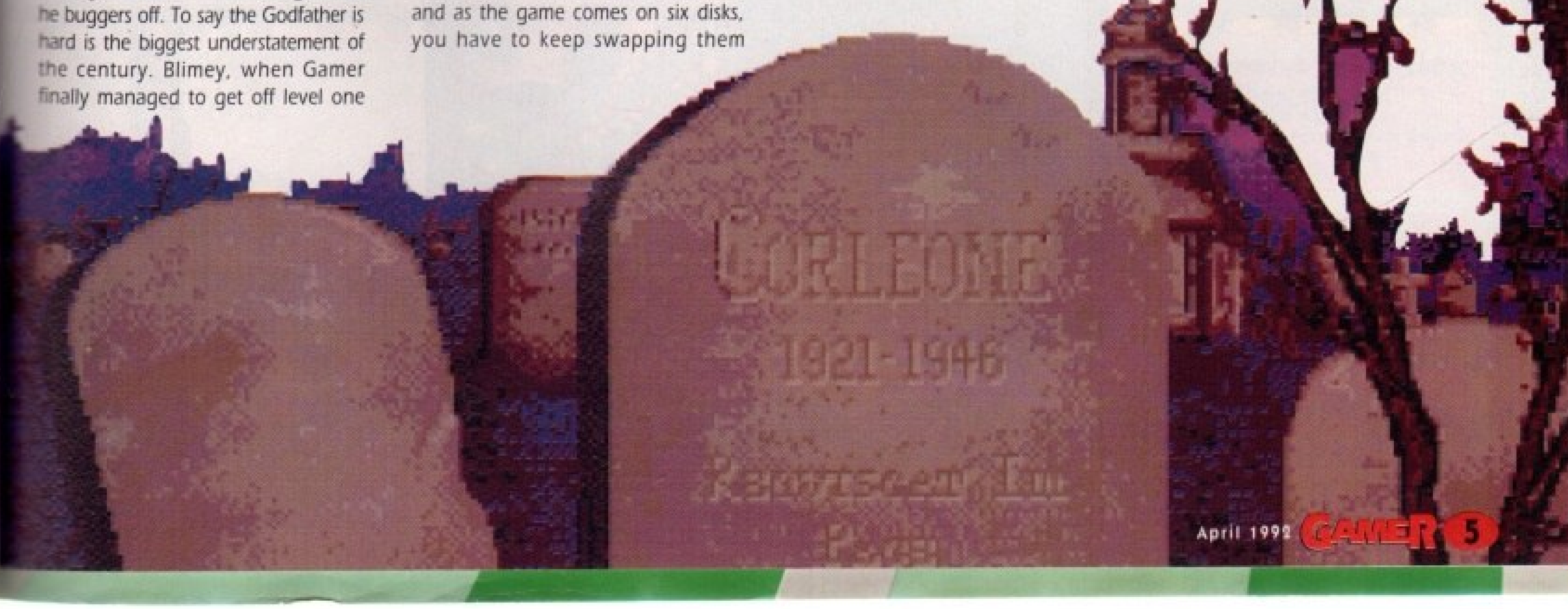
On the sound front there is a suitable tune at the beginning with adequate sound effects in the game. A nice touch is bodies that stay where they are in a pool of blood instead of disappearing in a puff of smoke, meaning that if you are quite good you can gather a nice collection.

The scrolling is dodgy to say the least, and suffers from jerky syndrome, and as the game comes on six disks, you have to keep swapping them almost constantly – even in the middle of playing!

I suppose that if you're a die hard shoot-'em-up freak then Godfather might interest you, but for me it's below average, apart from the graphics which are some of the best I've seen for a long time. It's one of those games which you see at a friend's house and then laugh at them for buying it.

I was really disappointed because US Gold make some truly cracking games (take Another World for instance). Unfortunately, Godfather is about to take a dive into the swamp of crap TV and film licences. I think I'll end this review with a Star Test-type thing. Smarmy Computer: "Choose some words to describe the Godfather." Me: "Errr, repetitious, jerky, crap and the graphics are really quite smart."

Jonathan



Arnie and Devito get cute



Mega Twins

US GOLD ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

Fairly familiar territory this one, I'm afraid. Cute Platform Game Syndrome. Probably terminal. No known cure. Tragic. Esther Rantzen's setting up a terribly sincere Telethon to raise money for it as we speak. Difficult times, difficult times...

It's the same old story. Long ago in a colourful and fluffy land lived a wise and just king. The king spent his days walking through the forests and talking to rabbits and deer. And at night he'd listen to cheeky Paul McCartney records and ring up all his loyal subjects on the telephone and tell them they were very special little people and he loved them all as individuals.

He was, to be honest, a right ponce. He also had two sons. Twins actually. And they were pretty "Mega" too. Hence the name, I s'pose.

Anyway, some big evil monster somewhere decided that it'd had enough of all this poncing about and listening to Paul McCartney records and set about ravaging and pillaging, left, right and centre. All the usual palaver followed, all the bunny rabbits and deer got killed horribly, the king and his subjects got splattered everywhere and all the Paul McCartney records got smashed. So it wasn't all bad.

But as if by some blinding stroke of luck, those oh-so-remarkable twins survived the apocalypse. Quite how these two managed to dodge all that fire and brimstone is quite beyond me, but survive they did and they grew up to become fearsome warriors – while retaining that all-important cuteness, of course.

And so, with spiritual guidance from that now familiar over-endowed platform game goddess, they set off through various worlds to restore peace, justice and the original recording of Mull of Kintyre to the land. Thank God for that, eh?

I don't think I'd be sticking my neck out too far by saying that Mega Twins owes quite a lot to games like Mario Brothers, Rodland, New Zealand Story and thousands of other cutesy platform romps. It's not quite what you'd call a wildly original concept, but Ver Twins manage to do all the old tricks with a fair dollop of style and addictiveness.

The first three worlds, which can be played in any order, take you through land, sea and air in a quest for some magic items to beat the bad guys with. This means that the controls change slightly depending on which terrain you're on.

In the sea you are susceptible to currents, in the air you have to keep prodding up to keep airborne, and on the ground, well, things are as you'd expect. It's only a little thing but it helps to give Mega Twins that little bit extra.

Once all three magic items are in your cute clutches, they unite to become some mystical dragon thingy. Doesn't really seem to make much difference, but it does mean that you've made it to the monsters lair. Spooky, or what? Things get a lot harder from here on, as the monsters lob everything they've got at you and your twin. And that's it. At least as far as I can get.

The graphics are standard for this sort of game. You know the sort of thing – cute heroes, weird, wonderful enemies and colourful cartoony backgrounds. Hidden bonuses abound and extra weapons are there for the taking. Seen it before, and I've probably seen it done better as well, but Mega Twins is inoffensive enough.

Unoriginal, untaxing and un–something else, but still good enough to spend any spare cash on. Worth a look if you've nothing better on.

Daniel



Once under the waves they set about killing the local fishies



The twins try to keep their distance from this humungous mountain man



This Cloud Guardian needs to be put to sleep before you progress



Zoiks, as Shaggy might say to Scooby Doo

VISION – 4/5
The standard cutesy platform look. Pleasant, but derivative.

AUDIO – 3/5
Again, the usual FX and a bouncy tune. Nowt new.

PLAYABILITY – 4/5
Despite the stereotypical approach, it's good fun

ADDICTION – 3/5
Probably too easy for long term appeal.

72%



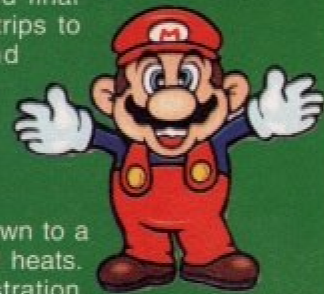
THE COMPUTER GAMES OLYMPIAD 1992



WHAT IS IT? For the first time in this country a National Computer Games Competition encompassing all your favourite games and the chance to win the coveted Computer Games Champion Award for your category.

AMIGA

WHAT ELSE CAN YOU WIN? Prizes will be awarded for style, gameplay and high scores as well as for positioning within each category. Prizes will be given both at regional and final levels and will include International Holidays including trips to Disneyworld, £10,000 Cash Prizes, Computers and Computer Games. Each entrant will also be given a certificate of attendance stating their position gained and the overall rating given by the adjudicators. Due to our unique system at least 2,500 people will be winners!



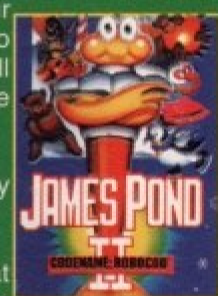
WHERE IS IT? As much as possible we have tried to keep travel down to a minimum. On the right is a list of 40 towns which will all have regional heats. Any other towns or areas that have a large registration count will also be included in the regional heats. The finals will be held in London at Wembley on the 25th September 1992.



WHEN IS IT? Regional Heats and Finals will be held between May and August in the evenings and on weekends. The Finals will be held in September. Final Venue dates will be furnished on May 4th, 3 days after the final registration date.

PC

HOW DO YOU ENTER? Easy, just fill in your registration card below and send it with your registration fee to the Olympiad Committee at the address below before the final registration date May 1st. On receipt of your application all your details will be placed into our competition database and your entrance number and ticket will be despatched to you as well as a complimentary spectator ticket for a friend. On May 4th you will be sent confirmation of the date of your local regional heat and the venue.



WHICH CATEGORY WILL YOU BE IN? Categories will be by computer type, age, gender and game type.

HOW WILL THE COMPETITION WORK? Prior to the competition starting at each venue, time will be allotted to each entrant to practice. For maximum enjoyment, each round will include competing both against other competitors as well as the computer itself. All entrants are guaranteed at least 20 mins gameplay. Adjudicators will be giving points for combat style and sportsmanship. Each region will produce 20-25 winners to go on to the finals.



ARE THERE ANY LIMITATIONS TO ENTRANCE? Yes. There will be a maximum of 10,000 competitors, and as we expect a good demand, we advise that players send in their registrations as quickly as possible. The minimum age for entrants is 13.

WHERE CAN I GET MORE INFORMATION? Call either of the registration hotlines for more details.

(081) 568-1429 (0707) 665980

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The Olympiad Committee
Spike Island - 7 Essenden
Herts. AL9 6JF

OLYMPIAD 1992 REGISTRATION FORM

Computer make & model *(delete those not applicable)*: Acorn / PC / Atari / Nintendo / Amiga / Sega

Title : Mr/Miss/Mrs

Name: ....

Address: ....

....

....Postcode: ....

Daytime Tel No.: ....

Evening Tel No.: ....

Age: ....Occupation: ....

Left or Right Handed: ....

(This form can be photocopied)

Top 3 Favoured Games — Hi-score/Level

1:.................................... ....

2:.................................... ....

3:.................................... ....

Preferred times to Play: Evenings / Weekends* (Leave blank if either time slot is acceptable)

Please find enclosed my cheque/Postal Order for the sum of £10 made payable to Barclay Computer Services Ltd. in respect of the registration fee with the Olympiad Committee for the Computer Games Olympiad 1992.

Signature..Date....................

Dept. AC04

The dangers of dodgy wiring explored in...

ANOTHER WORLD

US GOLD • £25.99 • ½ meg • Joystick • Out now

GAMER GOLD

Never mess about with nature, that's what I say. It just isn't safe to fiddle about with atoms and stuff like that. I mean, all manner of horrendous things could be created. Big Macs for instance. Or it could be even worse.

You might create a cross-dimensional time/space continuum loophole and find yourself being simultaneously hurled into an alien environment. Well, maybe that's not quite as bad as a Big Mac, but it's not the sort of occurrence that you look forward to. Just ask Lester Chaykin.

Yeh, yeh OK so he's got a really crap name, but he does happen to be one of the bestest quantum physicists in the whole wide world. So nobody laughs at his name. At least, not to his face. Anyway, one night our Les is working late in his lab, fiddling with neutrons and things. The nature of his experiment is never revealed, but it seems to revolve around making a crackly lightning thing zoom around a tunnel over and over again.

Quite what Les hopes to prove with this I'm not sure, but I bet it's dead clever, whatever it is.

As you can probably guess, things don't go as planned tonight. Pretty obvious that. Wouldn't be much of a game if all you had to do was watch a lightning thing zoom around a tunnel, have a cuppa and then sod off home to watch Prisoner Cell Block H.

So, things go bonkers. A storm cocks up the experiment and the lightning thing bursts out of the tunnel into the lab, zapping a large portion of it into nothingness. And guess which bit of the lab Les was sat in? Yup, he gets zapped as well. Zapped into, amazingly enough, Another World.

Quite handy actually, 'cos if he'd been zapped into a supermarket then the game would be called Tesco or Morrisons. Not got quite the same ring has it? So "Another World" it is.

After watching the aforementioned events in the opening animation, you now take control of Les's destiny. He finds himself still sat at his desk, but it's now sinking to the bottom of a deep and very spooky alien lake. Sensibly enough, you swim up to the top and start to explore your new habitat.

The first thing you encounter in this barren desert world are some worm things that look extremely like, ahem, number twos. But these are number twos with attitude, 'cos if you run into them they'll stab you with their poisonous sting. So you've got to squash them.

Once you've got rid of them, you jog along a bit and are suddenly pounced on by this great big black monster. The

The cast that's out of this world

Les



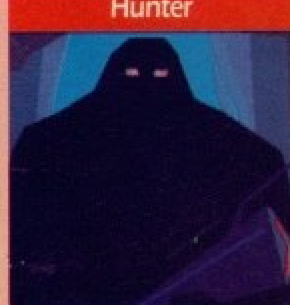
Les is the hapless scientist catapulted into another world by his own experiment. A bi-product of Glaxo Industries, he can't help but raise a smile when he sees a spirit level but he finds chives too complex to handle. When cornered he oscillates at a high frequency to warn ships away.

Spud



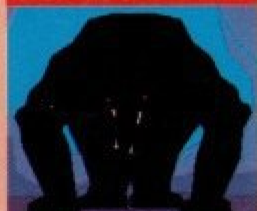
Les's alien comrade doesn't have a name, so I've called him Spud. He knows the aliens defences inside out, so if you're to escape you'll need to keep his back covered in fire fights. Oh, and he says "Mahtoombah". I love 'im.

Hunter



The alien hunter saves you from the monster, but then captures you for the slave mines. The aliens know how to make best use of the blasters, and they often use very advanced weaponry. Very dangerous, but you'll have to face them if you want to escape this world. And they're ugly.

Monster



This big beastie lives on the plains where you find yourself at the start. If you can keep out of his reach for long enough, you'll be rescued by this chappie...



Indiana Jones-style shenanigans in Another World



A friendly welcome? I think not



To get anywhere you'll need to be able to defend yourself...

One dark and stormy night in the lab...

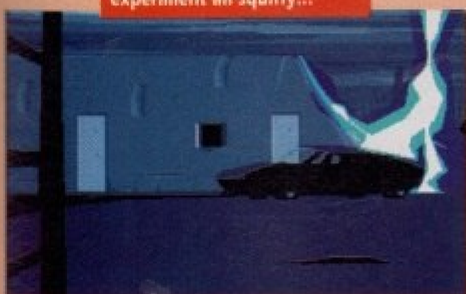
Les sits fiddling with his neutrons, and making a crackly lightning thing zoom around a tunnel...



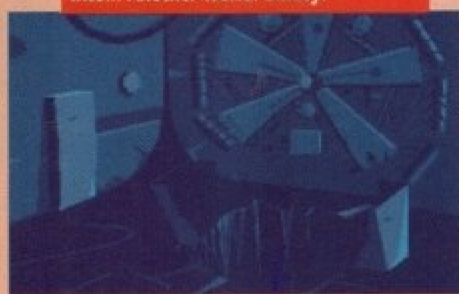




Disaster strikes and the lightning sends the experiment all squiffy...



One crackly lightning thing later and the lab, and Les, have both been zapped into... Another World. Blimey.



VISION
GGGGG
Brilliant animation creates a strong cinematic feel.

AUDIO
GGGG
No tune, but great FX add to the mood.

PLAYABILITY
GGGG
Lateral thinking is required, but the rewards are many.

ADDICTION
GGGG
Maybe too hard for some, but worth the effort.

90%

smart money says that it's not friendly, so legging it is the answer.

A bit of exciting chase-type action later, and you're rescued by some tall, spooky alien blokes. And they promptly shoot you and send you to their slave mines. To tell you any more than that would spoil the story for you, so I'll stop right there.

Escape is the aim of the game, and to help you on your way you've got the eternal gratitude of one of the slaves who you rescue, and a stolen blaster. And on the downside, you've got a whole race of alien hunters at your heels and a multitude of tricky puzzles to get past. Still, you've got to laugh.

Another World comes from Delphine Software, who also brought us the exceptionally scrumptious Cruise for a Corpse, so you can guess what it looks like. Except you don't have to because we've generously supplied you with screenshots.

And yes, it does look good doesn't it? Not much detail, granted, but the animation's a treat. It's to the game's credit that it's hard to tell where the intro stops and the game starts. It really is that impressive.

However, unlike Delphine's last offering, this is a much more arcade-orientated game. Very, very similar to the much lauded Prince of Persia actually.

But whereas Prince of Persia featured level after level of essentially the same thing, Another World has a plot that develops as you get further in, and loads more variety. There are also shades of Space Ace, with its consecutive scenes to be solved, but luckily none of the associated playability problems, 'cos Space Ace was really crap.

There's no tune unfortunately, but the FX are excellent, and coupled with the smooth animation create a very cinematic feel to the game. The laser blasts are especially good, as are the crunchy noises as things get disintegrated. My favourite, though, just has to be when the slave you rescue thanks you with a hearty "Mahtoombah", whatever that means. I suppose it's the thought that counts though.

It is fairly difficult, but thankfully there's a sensible password system. Each separate scene in the game has a four letter password, so you don't have to play the whole thing each time you load it up. And although you only have one life, if you lose it you only go back to the start of the current scene.

This means that simple trial and error will get you a good way into the game, without it being too easy.

Great presentation, complementary sound effects and captivating cinema-style gameplay – what more is there to say? If you found Cruise for a Corpse too cerebral to get to grips with, then get your hands on this. A barnstormer.

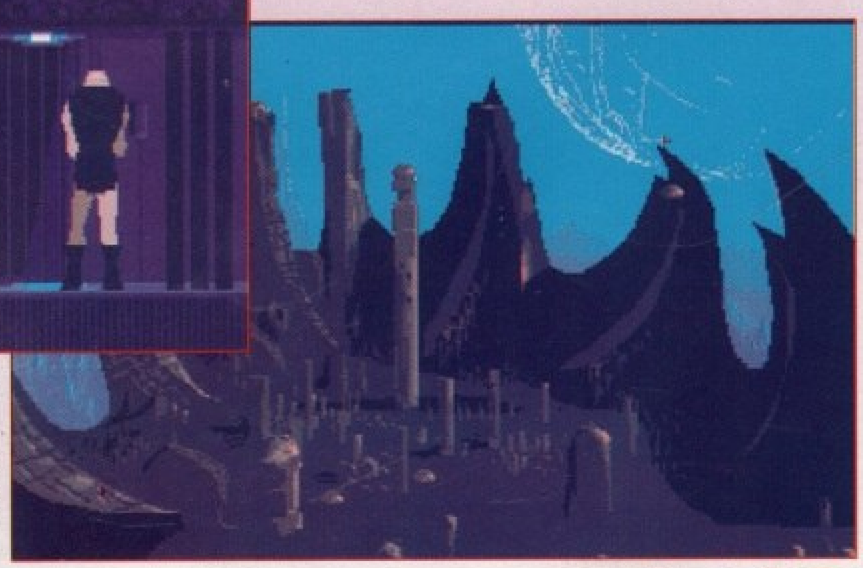
Daniel







Keep the guards at bay while Spud breaks the door code, or you'll end up as toast!



The alien world as seen from the top of the prison tower. Spooky, eh?



The owl tries to destroy Billy by performing his rather excellent Terminator impression

Press play and you'll find...



GREMLIN ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

Billy was just an ordinary everyday kid who loved to watch television. One day, his father brought home a brand new video recorder and some vids. Billy settled down to watch one, but found it was full of naked women and well-known Conservative MPs.

Billy quickly found another tape and this time instead of the sound of the videotape starting he heard a crazed, evil laugh. He approached the screen slowly, listening carefully. Suddenly it exploded into a million tiny particles, but instead of being thrown back by the blast, Billy found himself drawn in.

He felt himself being sucked down endless tubes, tiny particles of light searing through his body. Then, as suddenly as it had started, it stopped, and the acrid smoke began to clear. Looking down, Billy realised that he was dressed as a magician.



A mysterious voice boomed from above. "Billy, you are now trapped. You must find your way through the mazes and worlds I have created for you.

"There are five worlds to battle through, each with evil monsters and hazards to impede you. Should you succeed, you will be free to return to your normal life. But should you fail..."

Now all this being sucked into your dad's video business might seem a bit far-fetched, but it's a damn good idea for a five level shoot-'em-up.

As you might guess, you take on the role of Billy. Now I've led you to believe that Billy is a normal, everyday kid. Well I lied. To start with, he looks like a human lemming. But apart from this, he's a brave little dude – he dares to venture through five levels of danger and destruction, remember!

As well as dodging the debris, Billy can dish it out with his handy weapon which can be powered up to be, er, very powerful indeed. Billy also starts off with three smart bombs which come in very useful against the awesome end-of-level baddies – in fact, they're pretty much essential.

You start in Medieval World, and as you might guess it is set inside one of those rather ace ancient castles – with some rather deadly residents. Knights, gargoyles and ghostly monks will try to stop Billy from ever leaving. Not only are your enemies against you, but the castle will try and stop you by crushing you with a portcullis or by throwing some spears.

After battling through these hazards you will reach the end-of-level baddie which in the case of Medieval World is a huge owl. This powerful beast hoots at you, causing you to lose some of that precious energy. Using a mixture of smart bombs and sheer bravery, you destroy the evil owl and progress to the next level.

It's time to shout "ride 'em, cowboy", because you're transported to the Wild West. This level is split into four parts – two dominated by cowboys and two by Indians. Only armed with his "six-shooter", Billy takes on the might of dynamite-wielding John Wayne look-alikes and axe-possessing Indians.

Beat this level and you will progress through more of the same. Blast the flying spaceships in Science Fiction World, kill the gangsters in Gangster World and then fight your way through monsters, skeletons and bats in Monster World.



Hands up if you use Right Guard, hands down if you don't

Finish these levels and you'll go on to face your biggest foe. I haven't a clue who or what it might be – I'm good, but not that good.

Video Kid mixes old ideas with new. It's got all the old shoot-'em-up favourites like power-ups and end-of-level baddies, but gives you enough variation to keep you interested. The difficulty level is set just right so you progress each time you play it. The graphics, as you can see from the screenshots, are excellent.

On the sound front, there is a jolly tune at the beginning and plenty of FX throughout the game to keep the gamesplayer entertained aurally as well as visually.

So, although Video Kid is not going to set the software industry alight, it's nonetheless an extremely well written and playable game. Mainly because every level is graphically different from the last, it'll keep you playing for a long time to come.

Jonathan

VISION — GGGG
Stands apart from the rest due to its wonderful graphics.

AUDIO — GGG
Jolly little tune and a good balance of sound FX.

PLAYABILITY — GGGG
Easy control system which makes the game fun to play.

ADDICTION — GGGG
Plenty of variety to make the most hardened player return.

85%



Vidoe Kid shows us some of his skills by killing off some Turrican lookalikes

Blimey! It's a brand new concept!

GOLDEN EAGLE

LORICIEL ▪ £24.99 ▪ ½ meg ▪ Joystick ▪ Out now

Something's been bothering me now for, ooh, four or five seconds at least. Why is it, I've been wondering to myself, that whenever the baddies in arcade adventures get hold of whatever powerful item all the goodies are after, they always split it into several pieces and hide them?

Where's the logic in that? It'd make things a lot easier for them if they just got the sought-after object and blew it up, or melted it, or blasted it into space. That way the goodies would never stand a chance of winning. Brilliant, eh?

Except that way, all arcade adventures would be very, very, very difficult indeed. Unless you got to play the baddies that is. In fact, that's not a bad idea is it? An arcade adventure where you get to play the forces of evil, rather than the normal namby-pamby good guys.

And could Loriciel have released such a game in the guise of Golden Eagle? No! It's just another arcade adventure with four pieces of some statue to find! Had you going for a bit though, didn't I? Arf arf! "Enter a universe close to ours yet light years away..." begins the manual in a rather distressingly self–contradictory way. It then goes on to tell the familiar tale of one man rising up to right wrongs and free the oppressed from the nasty alien blokes, simply by collecting four pieces of the all-powerful and really rather shiny Golden Eagle statuette.



Once all four pieces are collected, the world will be a happy place and all that was wrong will become right. What a handy little statuette that must be, eh?

You take the role of this saviour, naturally, and must roam about the huge complex that makes up the city where this game takes place. You can log on to the city's computer terminals and use them to help you in your quest. The mutants, who obviously live under the city, will use these terminals to contact you with instructions as to what you should do. Quite nice of them, I thought.

And so you start to trundle around the vast, and largely dull, city shooting guards and, well, that's all you actually seem to do. Lots of running from screen to screen, firing your gun and getting captured seems to be the name of the game here. And when you are captured the guards, in their doubtlessly infinite wisdom, decide to dump you at the start of the corridor they caught you on or in a jail from which it's phenomenally easy to escape. Clever fellas or what?

The game blurb promises animation better than Prince of Persia, and while that may very well be true, it doesn't stop the game from being completely boring. The main character looks very convincing as he whips out his weapon (fnarr) and prepares to kick bum, but there's nothing more to do than leg it around and shoot the odd guard or two. After a while you'd gladly sacrifice all the swish animation just to get something interesting to do.

Basically, it's a tired format and the supposedly amazing animation isn't really quite as amazing as it's cracked up to be. Yeh sure, it's very pretty, but I personally think that Another World is a lot better to look at, and a damn sight more exciting to boot.

The sound is average, and the gameplay is dull beyond belief. What this sort of game needs is a new twist in the gameplay, not fancy graphics. Buy at your peril.

Daniel

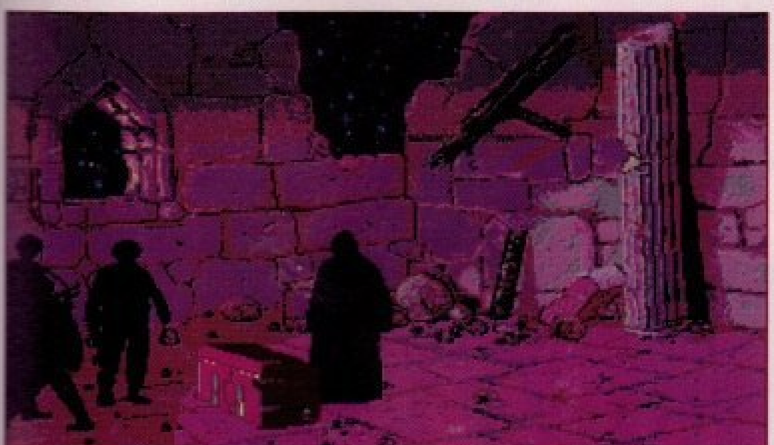
VISION GGGG
Clever animation doesn't hide the crap gameplay.

AUDIO GGG
Nothing really worth getting excited about.

PLAYABILITY GGG
Once you've seen the animation, there's little else to do.

ADDICTION G
A distinct lack of variety doesn't make for a gripping game.

45%



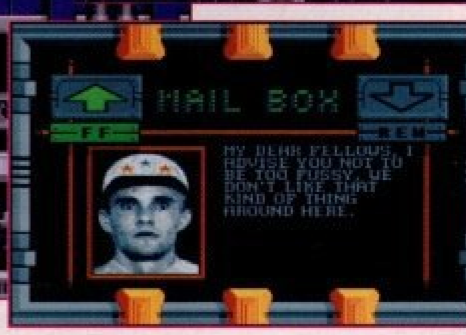
Aha! I have found the Golden Eagle! Now to break it into several pieces and hide them so the goodies can look for them! Ha ha ha ha ha



Look at those goooorgeous graphics. Pity the game's crap...

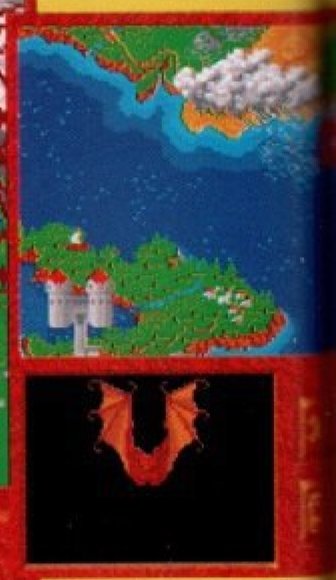


How does he do it? Biffa manages to get yet another subliminal reference into a commercial game



Quake in fear, I'm being threatened by Bobby Davro in a cap

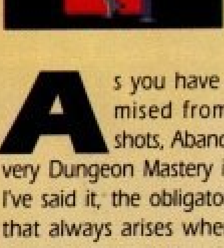




Once outside, I visit a nearby town. "Coooeee, anybody home?"

GAMER GOLD

Jeremy Beadle's Fan Club?



ABANDONED

ELECTRONIC ZOO • £29.99 • 1 Meg • Mouse • Out now

As you have probably surmised from the screenshots, Abandoned Places is very Dungeon Mastery indeed. There, I've said it, the obligatory comparison that always arises when this type of game is released. Now I refuse to do it any more!

So just how does Abandoned Places shape up to all the other contenders ? Well, it shapes up rather nicely indeedy.

Apparently, the world of Kalynthia is in a bit of bovver. The Prince of Evil, Bronagh, has escaped from his enchanted imprisonment within a volcano and is intent on spreading evil throughout the land again. These Usurper types never learn, do they?

However, Bronagh's return was foreseen at the time of his demise and the 12 heroes who were instrumental in messing up his plans of chaos were cast in stone to preserve their powers, ready to do battle with Bronagh once again. I don't know about you, but if I had just spent long, perilous years of my life clearing the world of evil, being cast in stone would not be high on my list of rewards!

As might be expected, you control four characters from a choice of the 12 heroes, but your party must consist of two Warriors, a Cleric and a Mage. Once chosen, you find yourself beneath the temple of Heaven's Light



"OK you dirty bat." My cleric prepares a Death Breath spell (or Vindaloo Vengeance as I prefer to call it)

and your first task is to reach the surface, picking up weapons on your way.

This part of the game is in the familiar 3D first-person perspective, as found in DM (aaarggh! I've done it again! I must control this comparison urge. I know! I'll get a drink from the office coffee machine, put the cup in front of me, then every time I make a comparison, I'll force myself to drink it. Now that's what I call the ultimate deterrent!). Now, where was I? Oh yes, the 3D first-person perspective (glances nervously at alien substance trying to eat its way out of a nearby cup).

This display consists of the actual view of your surroundings, and four portraits – one of each character.

These portraits show strength points, spell/action points, the character's direction of attack, what the character is holding, a spell selection window, movement icons, a message window and a detailed display of a selected character and his/her possessions.

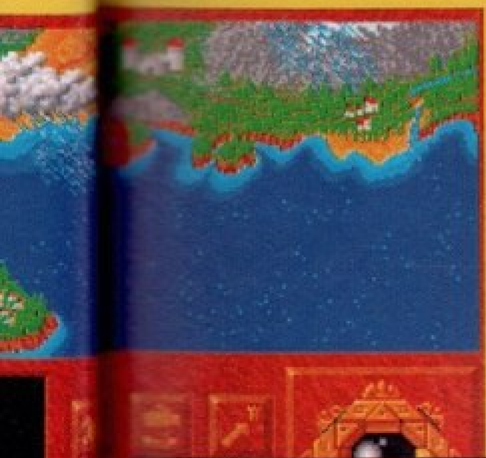
As you explore, you will come across all manner of monstrous manifestations, and you will have to do battle with them sooner or later. This is where the spells come into their own.

The two magic users, Cleric and Mage, have a maximum of 21 spells to choose from. Each character has a unique list of spells, making a total of 42 individual spells within the game. My favourite spell is Death Breath, or Vindaloo Vengeance, as I like to call it.

The two Warriors, having no spell casting abilities, must rely on weapons found or bought during the game to fend off the fiend's during their travels.

Unlike Dungeon Mas.... Gulp! I nearly slipped up again there (glances at the worrying sight of a mutated-beyond-recognition coffee cup). What I meant to say was... once you reach the surface, the perspective changes to an overhead view of the land with the party position displayed as a marker icon.

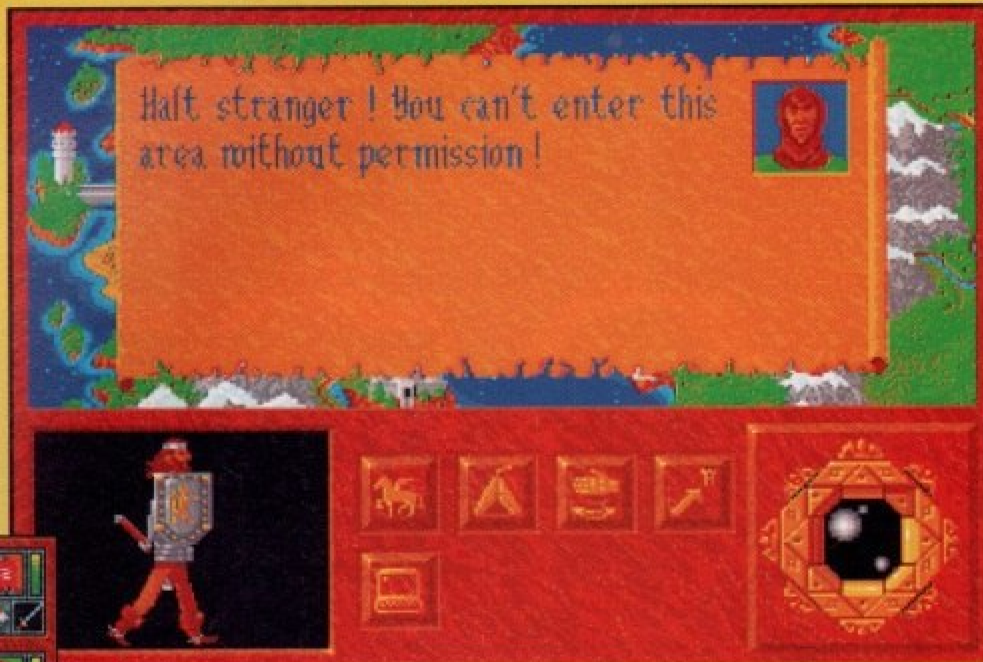
The view is quite detailed, showing various cities, villages, snowcapped mountains, swamps, rivers, roads, deserts and vegetation. The different types of terrain also affect your speed of



The quickest way to travel. Transylvania Airlines



Well this is what happens when you travel at night. Attacked by three bats. Pretty quick they are too, as one of my characters has just found out with two hit points to the kisser



One of the more hospitable locales. "OK matey, how do I get permission?"



What a shark! Unfortunately, the available party options do not include the choice of chopping his head off

D PLACES

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travel and the likelihood of being attacked, so keeping to a trail is safer and quicker, while wandering through the woods is downright dangerous.

This is not your average static view, either. There is a lot of animation onscreen, ranging from storm clouds to passing ships and flowing rivers. The actual map is larger than the screen and as you travel, the screen will scroll to reveal more of the land. You'll find a colour map in the game package which shows the whole of Kalynthia.

You can also travel over this land, in a number of ways – by foot, horse, ship or air. Not all of the travel modes are available at the start, however, and as you travel the time of day changes from morning to afternoon and eventually to evening. At this point you may elect to make camp or continue on through the dark, bearing in mind that travelling through the night can be dead dodgy – the emphasis being on dead.

There are lots of places to visit in Kalynthia. There's Sandmarch, a city in the middle of the desert known as the Sands of Fire and the capital city, Kal Kalon, ruled by the wise ones.

Each town and city has varying facilities for the party ranging from Blacksmiths, where you can purchase weapons and armour, to Apothecaries (try saying that with a mouthful of shortbread as I've just done. Oh crumbs!) where you can buy magical potions to aid your journey through the dungeons.

At Churches you can heal or resurrect characters who are particularly wimpy. You may even be given a quest to complete by certain people within a town, which will take you to further underground areas full of foul creatures to kill.

In fact, it all boils down to the fact that Abandoned Places is a stonking game. The gameplay is there, the atmosphere is there (especially if you read the included tome, The 23rd Chronicles of Kalynthia). There are also oodles of spells to cast, lots more than Dungeon Master had... Gulp!...

"No, please! You can't make me drink that stuff, Aaarghh, gerroff me, Glug! Glug! Gasp! Splutter! Cough!!! (comatose-body-hitting-the-floor sound as the diabolical dispenser claims yet another victim).

Darren

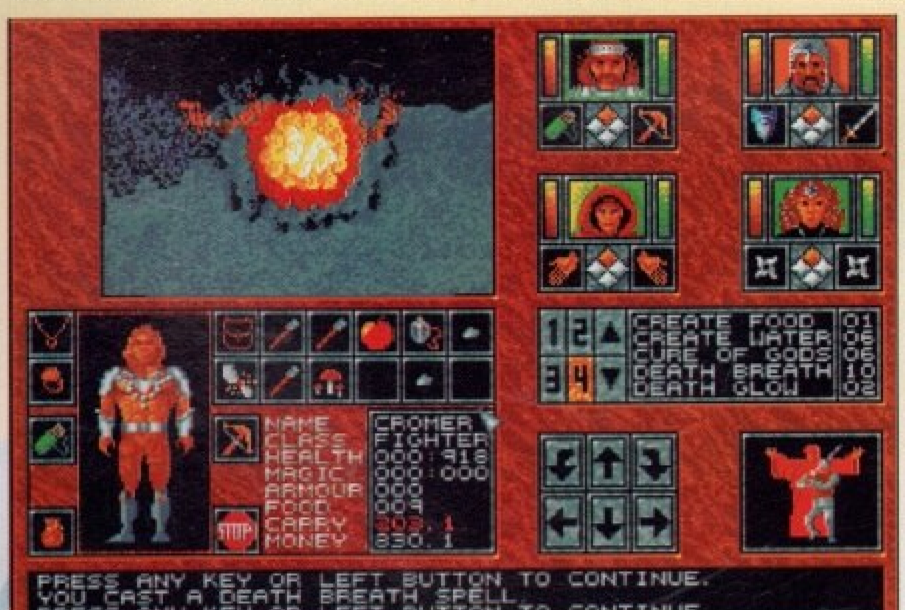
VISION
Good graphics, especially the animated map and intro.

AUDIO
All the swooshing of swords and fireball spells are there.

PLAYABILITY
Great playability. The game system works very well.

ADDICTION
You'll be back to play again and again

93%



"Whoof!" Two annihilated bats later...

Idiots at the wheel...

BIG RUN

STORM ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

Driving games are a reviewer's nightmare. They're never any different from the million or so other driving games, and there's never any plot to waffle on about for a couple of hundred words.

So how do you fill a page when you're dealing with yet another Out Run wannabee? I suppose I could fill in with some relevant driving anecdotes, like the one about how I once drove my Mum's mini into a huge puddle and filled it with water.

Or I could moan about how it took me nearly half an hour to chip my car out of a block of ice this morning. And my hands were bloody freezing.

On the other hand I could just launch into a soapbox-style rant about how sick I am of playing unimaginative driving games every day. Yeh, that sounds like fun...

I don't know about you, but I need another driving game about as much as I need a llama to spit in my face first thing in the morning. We've seen hundreds of them and to be honest, Lotus 2 has really pushed this particular genre about as far as it can go. And still they come...

This latest variation attempts to recreate the Paris to Dakkar rally in pixelated form. Not that this actually changes the game in any way, it just means that you race through the Sahara with all its inherent scenery changes. So, you set off on six levels of driving action, attempting to beat the other competitors. And that's all there is to it.

As games like Lemmings have proved, simple gameplay needn't mean that a game's boring, but when you've seen the game a million times before you can't help feeling that there's something more needed. The danger with this sort of game is that the player will just go into autopilot while playing.

You don't really pay attention to the game, you just react to the road and dodge the obstacles without a flicker of response. And that really isn't what a game should be like, right?

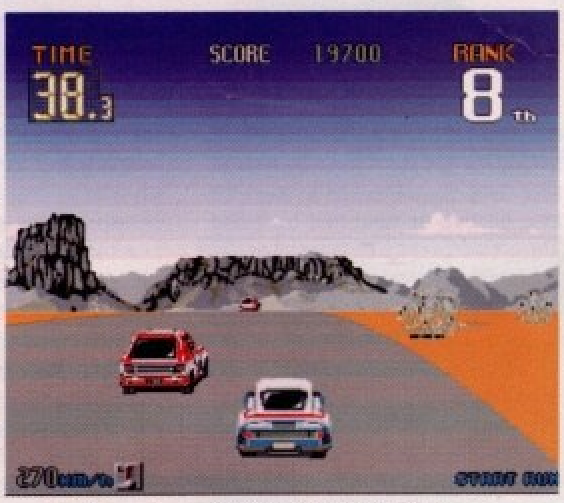
It's not as if the game is technically incompetent. The sprites shift at a fair old speed, but then so do most driving games these days. The same applies to the graphics – they're OK but who cares? Very few games nowadays have really crap graphics. It's one of those games that slip right past you. No "oomph", no new twists, just another car zooming down another road.

With nothing new to add to the glut of racing games on the market, Big Run is destined to vanish without making too many ripples in the software pond. If this had been released two years ago we'd have loved it to death, but in these modern technicolor times, it just doesn't cut the proverbial mustard. Just another driving game when all's said and done...

Daniel



A skid! (Blimey, it's exciting)



Country roooooads, take me hoooome etc etc



I've come off the road! (Blimey, it's exciting)

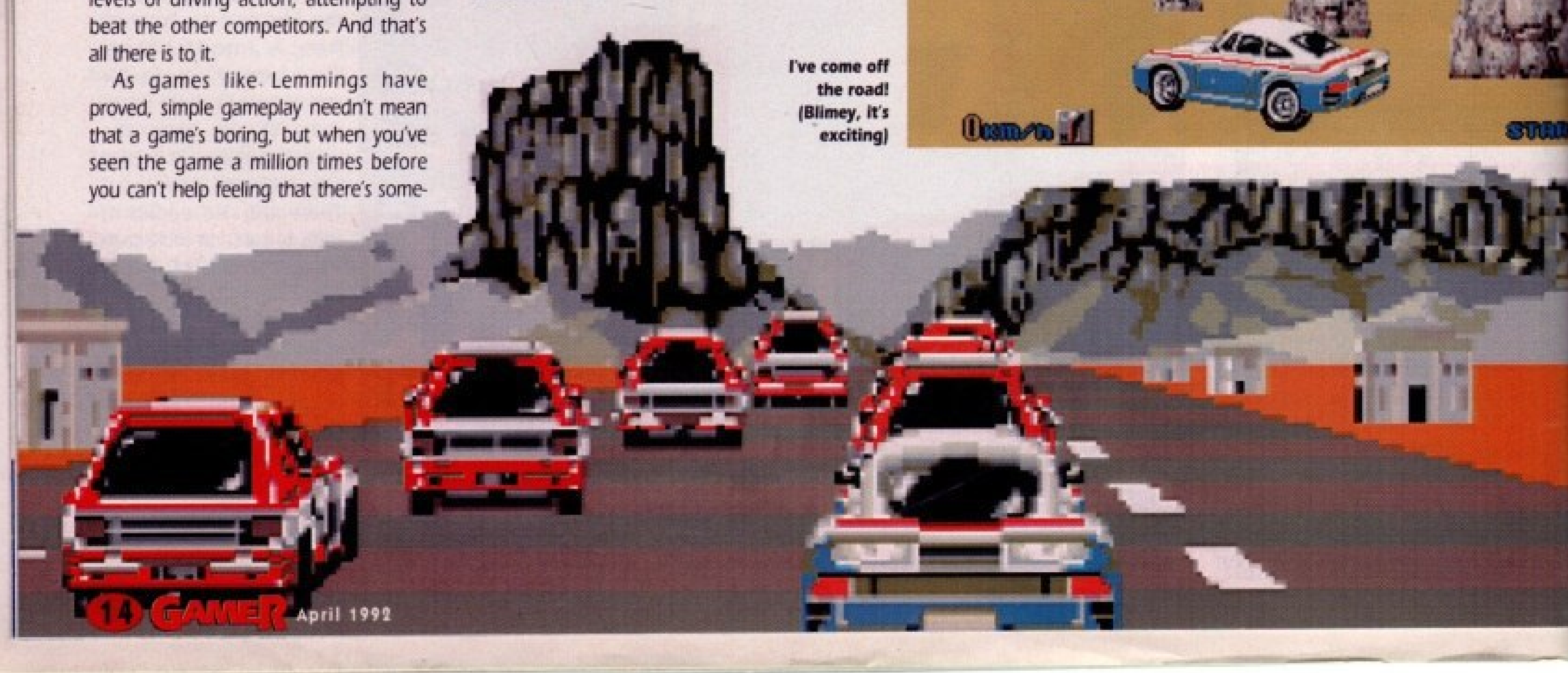
VISION: GGG — Average graphics...

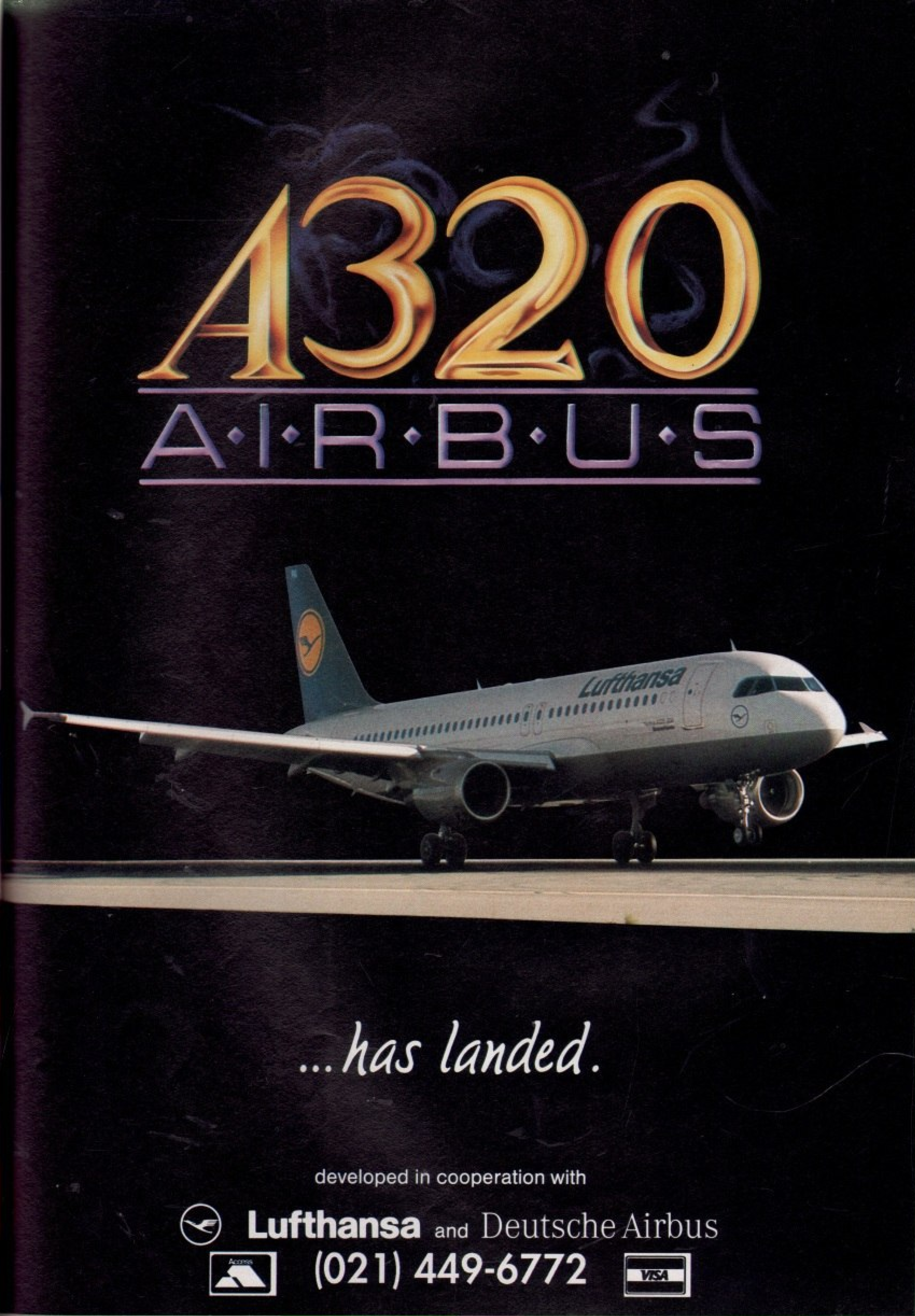
AUDIO: GGG — ...and average sound...

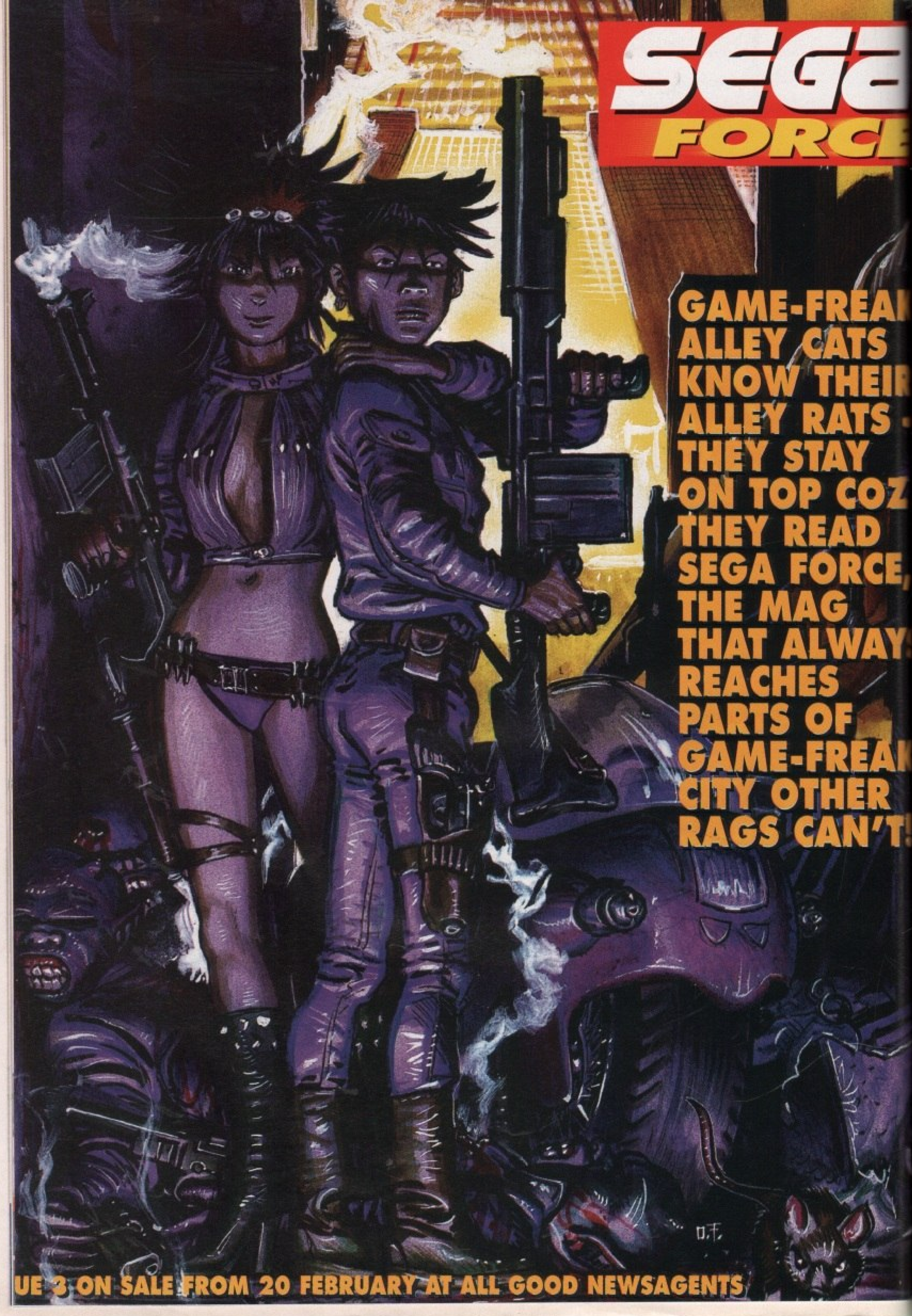
PLAYABILITY: GGG — ...er, average again I'm afraid...

ADDICTION: GGG — ...yes, averagely addictive as well.

60%




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the source

Plan 9 from Outer Space

Plan 9 from Outer Space is the crappest film of all time – official! And Gremlin haved actually paid to get the rights to it. Nutters

Plan 9 from Outer Space is one of those films that you won't forget in a hurry. It could be described as a potent mix of horror, science fiction and mind-blowing special effects. But that'd be a fib of volcanic proportions.

No, Plan 9 from Outer Space is one hell of a crap film. It's cobblers. It's drivel. It's a cringefest to end all cringefests. It's widely recognised as the biggest turkey ever to crawl out of Hollywood and Gremlin are planning to bring it to the home computer. Three cheers for Gremlin, eh?

Plan 9 from Outer Space was released in 1959 to critical acclaim. Except it wasn't. "Inept", "miserable", "awful", and "the worst horror film ever made" are just some of the comments that heralded this celluloid milestone.

It was produced, written and directed by Edward D Wood, reputedly the "worst director who ever lived". On top of this pedigree, Plan 9 boasted such drive-in luminaries as ex-wrestler Tor Johnson, Vampira (a dead ringer for Lily Munster), and Bela Lugosi, who should've known better.

The story – such as it is – starts with two aliens, Eros and Tanna, plotting to take over the Earth. Unfortunately, the bumbling twosome aren't much cop at this "taking over the Earth" lark, having already failed in eight previous attempts.

Thus they hit upon, yep, Plan 9, in which the bodies of the dead are resurrected and made to walk around with their arms waving around. Obviously, this unprecedented horror will bring the planet to its knees in no time at all, and so using some wobbly flying saucers as a decoy for the army they set their plan into motion.





However, there is a spanner in the works in the shape of one Jeff Trent. An airline pilot by trade, he also lives next to the graveyard from which the zombies are rising. For reasons best known to themselves, the zombies have nicked off with Jeff's wife and are holding her prisoner on board the spaceship.

Not being the type of B-movie hero to take this sort of intrusion lightly, Jeff joins up with his buddy Colonel Edwards and devises a cunning ploy to scupper Plan 9. In an uncontrolled spurt of strategic mastery he decides to walk into the spaceship and beat everyone up. Wow.

Needless to say, the aliens get wind of this awesome tactical manoeuvre and unleash every gizmo and gimmick that the special effects budget would allow at the gallant duo. Will the aliens succeed with Plan 9? Will Jeff save the world? Will anyone notice that the spaceships are just paper plates on bits of string?

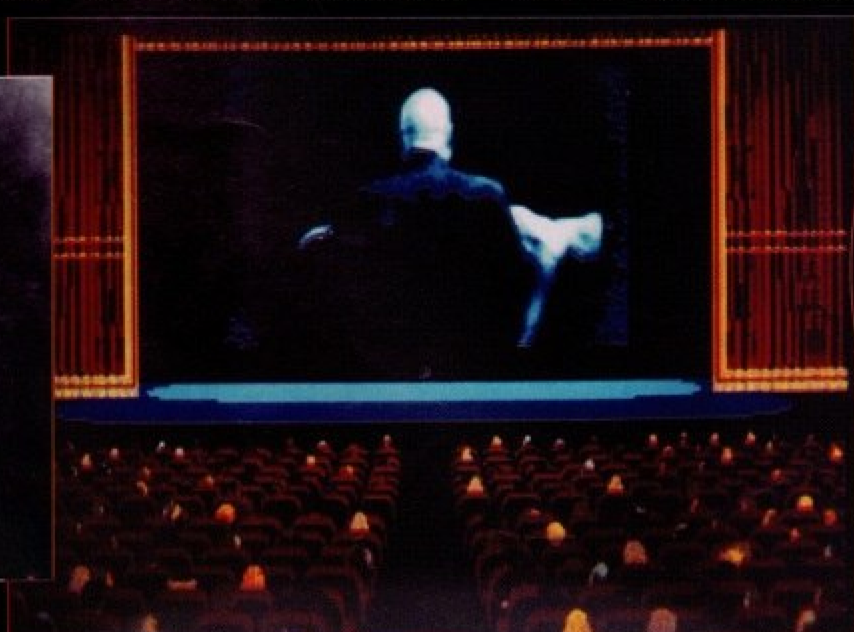
So, how do Gremlin plan to convert this masterpiece of modern cinema to floppy disk? Well, the game will take the form of a graphic adventure, not entirely dissimilar to that other great B-movie tribute, It Came from the Desert.

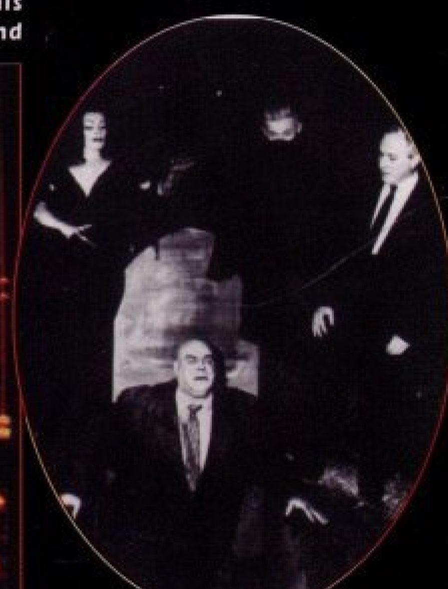
The usual point and click mouse interface will allow you to explore the environment of the movie and all the major characters will be incorporated into the plot. So that's that sorted out.

Your quest at the start of the game is to locate six reels of the movie, splice them into a finished product and return them to the producer. However, your objective may well become waylaid as you uncover new sub-plots.

Also, during play you'll be able to visit cinemas to view the reels you've found. When this happens, ➤







the Source

you'll be rewarded (?) with actual footage from the movie in all its digitised glory. Gremlin actually plan to include several full minutes of film footage in the final game. Heartless beasts.

The whole thing sounds suitably impressive, containing over 70 lush graphic locations with taxis and aeroplanes expanding the game to take in most of the world. Plenty of exploring is guaranteed, with loads of in-jokes for keen film buffs to keep their eyes peeled for.

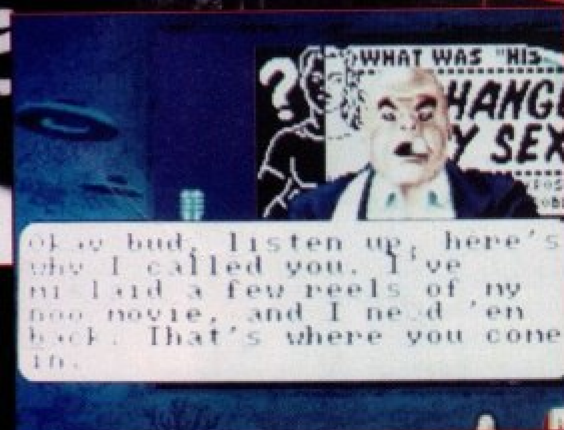
And Gremlin have promised that for those who finish the game there'll be "a reward sequence designed to impress and amaze". Sounds interesting, eh?

They kindly gave us a copy of the film, and by jingo it really is crap, but the game sounds and looks like it might be something worth getting excited about. Can't be any worse than the film, that's for sure.

Plan 9 from Outer Space is currently planned for an April release, although the price hasn't yet been decided. Until then, you'll just have to hope that Channel 4 does another series of B-movies late on Saturday night.

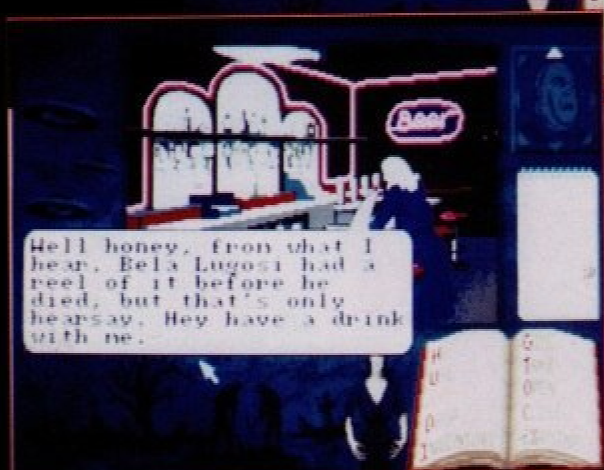












If you're one of those people...

...who enjoys spotting all the cock-ups in crap B-movies, then Plan 9 is absolute heaven! Here are just some of the more infamous blunders in this all-time turkey.

- Horror actor supreme, Bela Lugosi sadly died while making Plan 9. However, not wanting to remove the star's name from the credits, the director decided to bring back the character as one of the undead. Lugosi's place was taken by Woods' wife's chiropractor, who obviously had nothing better to do.

  Unfortunately, the stand in looked nothing like Lugosi and was a foot taller than him. So he spent the rest of the film with his cloak in front of his face. Nobody noticed. Honest.

- As part of what we can only assume was a post-modernist statement on the futility of existence, the same set is used for an aeroplane cockpit, the flying saucer, and a graveyard. Plus, most of the rooms seem to contain the same furniture. Uncanny...

- During the making of the film, a strange time warp caused some scenes to change from being at night to being in daylight and back again. And several cars changed colour during journeys. Was this evidence of alien interference, or just shoddy continuity?

- Director Ed Woods made sure that even the smallest character was blessed with sharp and intellectual lines, befitting a movie of this calibre. This following extract is spoken by a police officer when he discovers his inspector's dismembered corpse:

  "One thing's sure, Inspector Clay's dead. Murdered!.....and someone's responsible."

  Rousing stuff, I'm sure you'll agree.

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Me and my shadow...

SHADOWLANDS

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I don't know, you wait ages for a role-playing adventure game to turn up and then you go and get four in two months – it's just not fair. Following quick on the heels of Knightmare, Abandoned Places and Moonstone (OK, it's more action than adventure, but who cares) is Shadowlands.

I don't really know how to describe Shadowlands, but I'll have a go. It's a sort of, err, umm, isometric Dungeon Master with a mere shade of Akira thrown in for good measure.

You are now probably wondering what the hell Akira, the cult Japanese cartoon/film epic, has got to do with Shadowlands. Well hold on to your hats, helmets or whatever you're wearing on top of your head and all will be revealed soon.

Time for a story, I think. Are you sitting comfortably? The story follows an ancient legend. Drowned while fleeing enemy hordes who have invaded from the Shadowlands, you awake to find that your spirit is still very much alive and lusting for vengeance.

New supernatural powers give you the ability to control the minds of others. You must guide them into the Shadowlands where they must search and find your natural remains and from there take them to the altar to be reunited with your spirit in an ancient ceremony.

Just like Dungeon Master and all its contenders, you start the game with four intrepid adventurers. Normally you have to choose your adventurers, but not in Shadowlands – here you have to make your own. Using an Identikit system rather like the one in Midwinter 2, you get to design your brave lads.



It's a design your own Akira time folks!

If you remember, I mentioned Akira – well this is where the Japanese influence appears. All the graphics of your man's face, hair, mouth, etc are very oriental and you can get quite a good likeness to the bloke who runs the chippy down the road.

Right, you've made up your men and you've given them names, now it's time to play the game. You start off in an orchard with loads of apple trees, so you can do your best Darling Buds of May impressions, pretend to pick this year's crop of apples and say "Perfick" a lot.

While you are wandering around you encounter pesky crows and also find some very important weapons. After a bit of apple-picking and the odd game of hide and seek, you will eventually find the dungeon. Now the game really begins to take shape.

The first part of level one is merely a little taster and enables you to get used to the controls, so that you can move around quickly and efficiently. Movement is entirely controlled by your little mouse. By now you should have seen our little box with an explanation of the control system – if you haven't seen it, read it right now, it's dead important.

If you're a bit daft in the head and you haven't seen the screenshots then you probably won't know why the game is called Shadowlands. It's called Shadowlands because it uses a Photo-scaping system.

I suppose you'll want to know what a Photoscaping system is? It allows the game to actually simulate light and darkness. I know it sounds a bit complicated, but I'll make it easy for you by using a couple of examples.

Example one – when you light a torch in Shadowlands, you actually light up the area around you and you can see everything a lot more clearly. Example two – when you open a door, the light from the torch actually floods through into the next room, just as light does in the real world.

I know the word "gimmick" comes screaming at you from out of the darkness, but it really does add atmosphere to the game and lends it a realistic feel. The actual game is plagued by all manner of evil beasties like skeletons, rats



If you are crap at adventure games then this is where you'll end up...in the graveyard, six foot under



Your brave warriors have a laugh and a lark in Old Man Cheesy's orchard



It's the Shadowlands branch of the Dungeon Formation Dancing Club!

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You put your left leg in, your right leg out...



Head – Selecting this icon will allow your man to eat, drink and read tablets which are strategically placed around the dungeon.

Right arm – This icons allows your brave warrior to use items like coins etc, and more importantly allows you to fight whatever fiendish characters might be lurking in the dungeon.

Right leg – This icon allows you to move all your characters at once.

Left arm – The right arm allows you to pick items up and also lets you do things like pull levers and so on. Also if you click on both the arms, you will be able to throw items.

Left leg – This icon allows you to move just the one character.

Arrows – These arrows allow you to scroll through your inventory.

Energy bar – This tells you how much energy you have left.

VISION – GGGGG
Wonderful graphics and the Photoscape system gets top marks for originality.

AUDIO – GGG
Suitable intro tune, and the sound effects are more than adequate.

PLAYABILITY – GGGGG
Playability is truly outstanding, leaps on Dungeon Master from a high place indeed.

ADDICTION – GGGG
Ooh doctor, help me, I'm a Shadowlands addict. It'll keep you going for months and months.

94%

GAMER GOLD

and even Jeremy Beadle (are you sure? – Ed). Some of the beasties are harder than others and some so-called "beasties" are actually scantily-clad women. Also contained in the dungeon are loads and loads of fiendish puzzles. Sometimes the dungeon will help you with them by leaving a plaque for you to read, other times it won't. These puzzles will give you sleepless nights and a severe case of brain-ache.

For all you would-be wizards, there are also spells for you to play around with, but be careful – you wouldn't want to command a bunch of frogs around the dungeon!

I have been reliably informed that the dungeon bit lasts for 14 levels. Then you progress further to the pyramid and maze levels, so it definitely isn't one of those "I completed it in ten minutes" jobs.

Shadowlands is one of those games which will keep you entertained for hours on end. You know the type – you start playing in January and before you realise it, it's April.

Engrossed? I certainly was. I almost forgot about writing the review. And even now while I'm writing this, Darren, our resident adventuring expert, is deeply engrossed in it – at the moment he's turning the air blue.

In fact, hold on for a minute.

"Oi! Get off that Amiga!"

"Whaat?"

"Come 'ere you, take that!"

"Youch!".

Ho ho! That'll teach the bugger.

Overall, Shadowlands is the game all adventurers have been looking for. It has great graphics which, coupled with the Photoscaping system, gives a unique atmosphere, almost a feeling of actually being there.

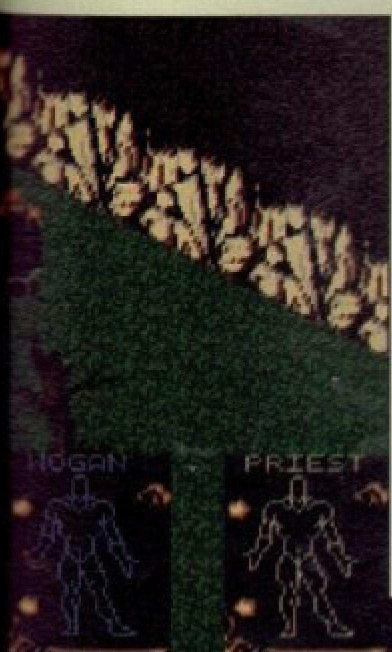
On the sound front there are suitable FX featuring grunts, screams, thuds, clanking, clanging and even a ding ding ding sound. And it's got a lovely intro tune.

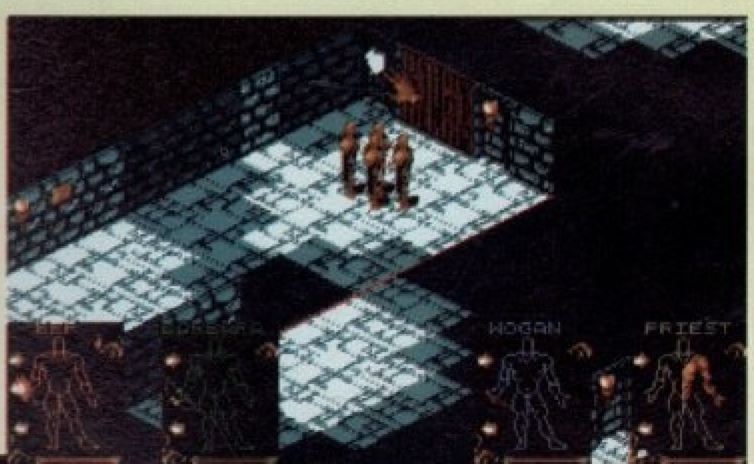
Playability? Do I even have to tell you about this? (Yes you bloody well do – Ed). OK, it's certainly one of the most playable games I've ever attempted. It even beats Dungeon Master, mainly because it's a lot more interactive.

The control system becomes second nature after just a few goes. You don't particularly have to read the manual, you can just boot it up and play it straight away – it's that playable.

It's time for a bit of a sum up, methinks – 2 + 2 = 4, and Shadowlands = bloody ace adventuring role-playing game.

Jonathan





Pull that lever and, err, umm, well I'm not telling you it's that obvious



I am the Oracle, a motor cycle courier, but I hope to get a job in local government soon

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talking shop

GAMER ELSPA Chart

Ten new entries this month, six climbers, 12 games drop, one non-mover and even one re-entry. Oh no, shock, horror it's a new number one. Fanfare, please! It's Formula One Grand Prix. Geoff Crammond's excellent driving sim has taken its time to get to the top, but now it's there it'll be very hard to knock off.

In the battle between budgets and full price, it's a dead heat at fifteen-all, but there are eight full price games in the top ten. A former number one – Manchester United Europe – re-enters at number 26. Ocean's dominance of the chart continues with WWF dropping down a place, and Robocop 3 drops a couple of places, but those lads and lasses from Manchester are still holding their own.

It's time to put those mystical hats on and look to the future. Here are our predictions for next month. Dan reckons Birds of Prey will fly up to the coveted number one spot, while new boy Darren has plumped for Populous 2. Because I am the top tipster I've chosen Another World – I suggest you run to the bookies immediately. Well, that's all we have time for this month – don't forget to tune in next month for more startling chart revelations. See ya, readers!

Jonathan

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2	↓	1	WWF Wrestlemania		Ocean	£25.99
3	↑↑	4	Birds of Prey	GAMER	Electronic Arts	£34.99
4	↓	2	Robocop 3	GAMER	Ocean	£25.99
5	↑↑	6	James Pond 2 – Robocod	GAMER	Millenium	£25.99
6	↓	3	Populous 2	GAMER	Electronic Arts	£29.99
7	↑↑	8	New Zealand Story		Hit Squad	£7.99
8	↓	5	Lotus Turbo Challenge 2	GAMER	Gremlin	£25.99
9	↑↑	15	Scooby Doo and Scrappy Doo		Hitec Software	£7.99
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11	↑↑	NE	First Division Manager		Code Masters	£7.99
12	↑↑	29	Robocop		Hit Squad	£7.99
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14	↓	10	Heimdall	GAMER	Core Design	£34.99
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17	↑↑	NE	International Ninja Rabbits		Micro Value	£7.99
18	↑↑	NE	Another World	GAMER	US Gold	£25.99
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25	↓	14	Batman – The Movie		Hit Squad	£7.99
26	↑↑	RE	Manchester United Europe		Krisalis	£25.99
27	↓	19	Return to Europe		Anco	£7.99
28	↓	22	Double Dragon 2		Tronix	£9.99
29	↓	20	Chase HQ		Hit Squad	£7.99
30	↑↑	NE	Football Crazy Challenge		Anco	£25.99

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PINBALL DREAMS

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Pinball on the Amiga. Now there's a neglected area. I honestly can't remember ever seeing a pinball game on our fudge-coloured friend. There probably were a couple, but I'd bet my complete A Team sticker album that they were crap. But now 21st Century Entertainment have chosen to stake their claim with Pinball Dreams.

Of course, pinball brings back all those memories of mis-spent childhoods in smoky arcades, and dodgy old Who records. "That deaf, dumb and blind kid, he sure plays a mean pinball!" they warbled. This sounded like an interesting little notion, so we set up a little experiment.

We loaded up Pinball Dreams, and plonked Biffa in a chair. We then blindfolded him, gagged him and stuck Blu-Tac in his ears. "Go on Biff, play a mean pinball" we ordered. He wobbled around for a bit, grunted and then fell off the chair. So, for the best results on Pinball Dreams, don't rely on crap rock operas by crumbly dinosaur rock bands. They're liars.

With that little test out of the way, and leaving Biff struggling away in the corner, the more able-bodied among us got on with playing Pinball Dreams. And it's a bit good if the truth be told.

Indeed, Biff really doesn't know what he's missing. With his blindfold he can't see the massive tables – almost three screens high – the full screen display, the smooth scrolling and pixel-perfect collision detection. With Blu-Tac shoved firmly in each ear, he can't hear the many groovy tunes and sound effects and with his gag he can't complain about it either. I should have done this sooner.

In Pinball Dreams, you get four tables to choose from. Admittedly, that's not really enough, but there is an eight-player option, so if you can get some mates round it should last you a good while.

The first is Ignition and as you can see from the piccy, it's set in space. You also get Steel Wheel (a Western railway game), Beat Box (set in the music biz) and Nightmare, which is based around, erm, a nightmare. Each table has its own tune and sound effects, as well as having a very distinctive design.

Control is extremely simple. Use the down cursor key to pull back and release the spring, and shoot the ball into play. The left and right Shift keys control the flippers, and if you want to cheat then Space will tilt the table. However, over-enthusiastic tilting will forfeit your turn.

And that's it. Just keep the ball in play and try and smash the high scores, which are saved to the disk each time you play. The best thing about Pinball Dreams is that, as well as being great to look at and listen to, it's brilliant to play. The way the ball moves is unnervingly realistic, and while there aren't really that many features on each table, it manages to keep the excitement going without appearing too cluttered or empty.

And as for the addiction level, well, imagine having a pinball table but not having to pay to play it. It's very, very hard to resist just having another quick bash.

The morning we got it, we booted it up at about half nine and it didn't get turned off again until five o'clock. It's now ten past nine the next morning and already Darren is well into his third game. Addictive? You could say that.

There is one criticism, and that's that for nearly £26 you don't get enough variety. Once you've mastered all four tables, the appeal might not be as great. A table editor would've been a nice idea, or even the option for further tables on separate data disks.

Even so, what you do get is a maddeningly addictive pinball simulator with the added bonus of an eight-player option. If pinball is your thang, then get hold of it immediately.

OK, get off the Amiga, Darren. It's my turn now. Hang about, is Biff supposed to be that purple colour? Oops.

Daniel

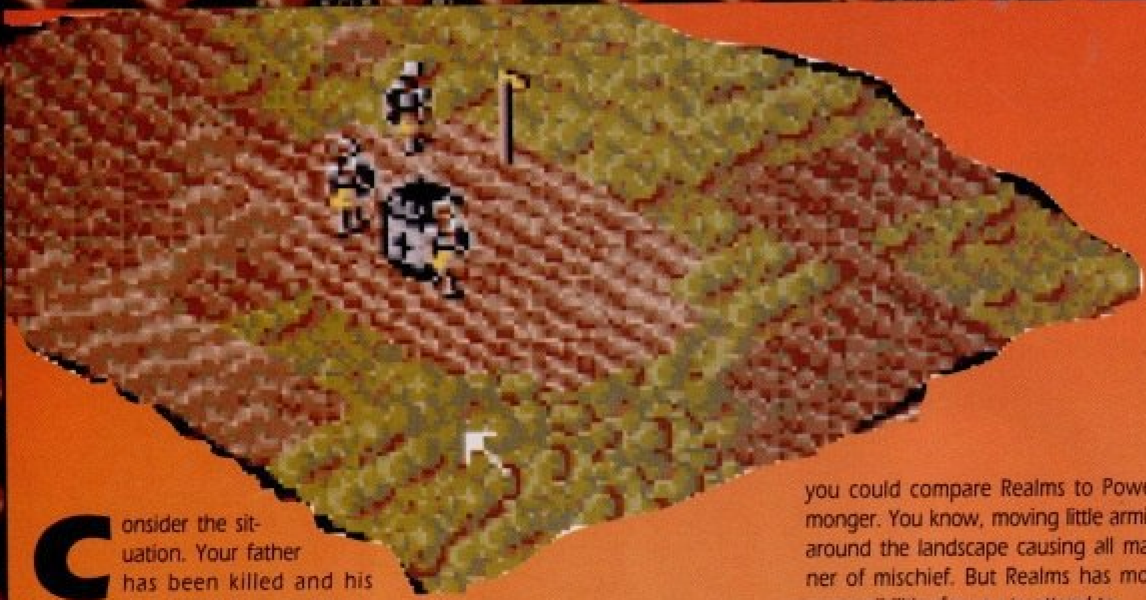
VISION GGGG
Smooth scrolling, movement and colourful displays.

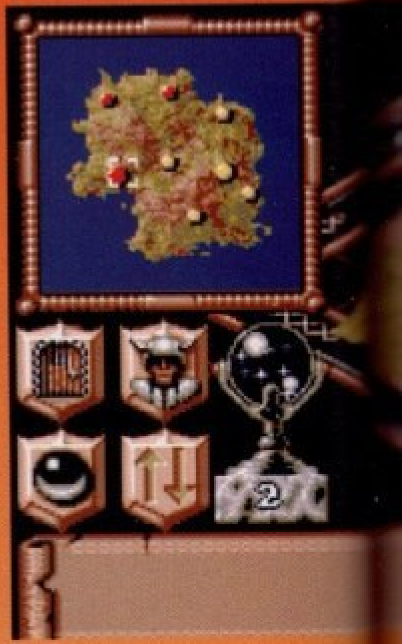
AUDIO GGGG
Each table has its own funky tunes and FX. Excellent.

PLAYABILITY GGGG
Easy to get used to, and hard to get out of.

ADDICTION GGGG
Limited in the long term, but perfect for "just one more go".

86%





Consider the situation. Your father has been killed and his entire kingdom and all its wealth are now in your hands. Seems pretty enticing, doesn't it? All that money and property.

Well there's just one teeny problem – the condition of the kingdom upon the old man's demise is somewhat less than perfect. In fact it's safe to say things have reached crisis level.

Famine is flourishing, poverty is rife and other realms are vying for dominance of the land. And you have to sort it all out, while ensuring that your realm comes out on top. Flipping inconsiderate of dad to get killed like that, leaving all this mess to clear up. Anyway, someone has to do it so you might as well get on with it.

The aim of Realms is to ensure that your kingdom reigns supreme among the others. To achieve this, you have to fortify your cities and recruit and train armies and cavalry. Oh, you also have to look after the welfare of the citizens of your newly-acquired land (bloody civvies, nothing but a nuisance if you ask me. Can't they see you've enough on your plate as it is?). So, it's off to the nearest clearing to appeal for justice from the Gods. Now these Nordic Gods are pretty accommodating. Just raise your fist to the skies, scream, and Bob's your uncle – divine assistance to take away. So with emotions swelling in your soul and rage filling your mind, you cast your eyes to the heavens and demand justice.

The clouds part, the sky booms and the Gods give you... a belt buckle! Well, it looks like a belt buckle – the kind you might find on a Iron Maiden groupie – but it is, in fact, the Symbol of the Serpent, giving the bearer powers beyond belief.

"Oooh, this will come in handy!" you say to yourself and promptly set off to restore your Kingdom I suppose you could compare Realms to Powermonger. You know, moving little armies around the landscape causing all manner of mischief. But Realms has more responsibilities for you to attend to.

You must impose taxes to generate enough money to equip your armies with varying weapons and armour, so they can attack any enemy towns (thereby weakening your enemy or enemies). You must buy grain to feed the populace, develop your towns to make them larger and more resistant to attack and generally ensure the survival of your people. In fact, the number of duties to attend to are just right. Some games go over the top, requiring you to control innumerable activities, which can completely spoil the game. Realms is graphically excellent, and the overal game system is pleasing to use. Yo view your surroundings via the com mon isometric representation, and there is also an overhead map giving you the entire land to survey.

The animation of the armies a they trundle about the land on their merry way to mayhem is quite nice too.

At the start of the game you are placed in a fairly simple default scenario, but there are eight more increasingly difficult scenarios to choose from via the disk icon. The



Keep a look out for the enemy men





This is where you can view the entire land and set the tax rate



Right lads. left, right, left, right. Keep that line straight men. Show the enemy we have style



Er, sarge? I'm sure they're eating Weetabix

Don your helm and rule the Realm...

REALMS

VIRGIN GAMES ▪ £29.99 ▪ ½ meg ▪ Mouse ▪ Out now

battle sequences are my fave part. Your individual units are displayed on a battlefield along with the enemy's units, and you can select the type of formation you assume from wedge, phalanx, line, and square, each having its own merits. You can change the direction in which the unit attacks and also select whether to fire any missile weapons such as bows. These enable you to diminish the opposition before you close for hand-to-hand combat.

Last but not least, you have the attack or retreat icon, which lets you start your attack, or, if things go dismally downhill (as was frequently the case with me), lets you scarper! The entire battle sequence runs in real time, which leads me on to a couple of gripes. With numerous units to control and the large number of controls at your disposal during a battle, it can become too hectic to deal with at times.

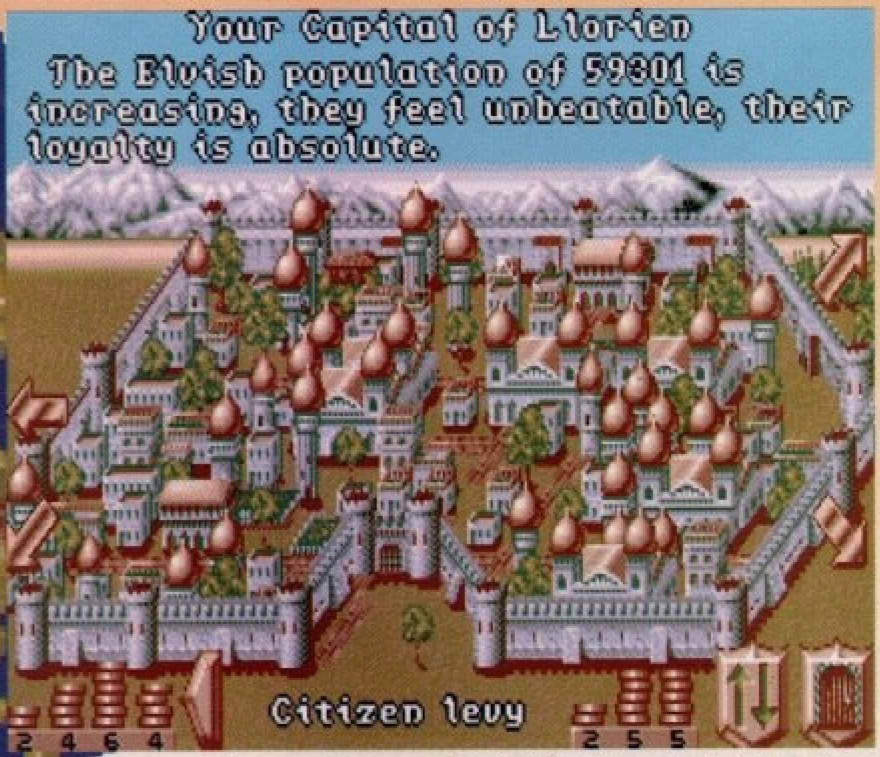
Having to switch quickly between units to give differing orders requires some manic mouse manipulation, I can tell you. Also, the required position of the mouse when selecting a unit is a little too precise for comfort. You need to have the pointer directly on the unit flagpole, for instance, for it to be selected.

Sound effects are good, with an accompanying theme constantly playing in the background. During battles you hear the clanging of swords which adds a touch of atmosphere to the events.

Overall then, Realms is a competent addition to the increasing God/War game domain and is worth taking a look at.

Darren





My capital. Wonderous, majestic, all the mod cons

VISION
Super, smashin vizzies.

AUDIO
Good atmospheric music.

PLAYABILITY
Good playability.

ADDICTION
Too many similar games.

75%

He's back! And this time he's completely different!

KID GLOVES 2

MILLENIUM • £24.99 • ½ meg • Joystick • Out now

This isn't really Kid Gloves 2, y'know. Not originally anyway. This little platformer started life last year as a game called Little Beau. But it was such a crap name for a game that the company responsible spontaneously combusted and left poor old Beau wandering about in software limbo.

Then Millenium came along, and rescued the little bugger. They tarted him up, buffed up his helmet and redubbed him Kid Gloves 2. Despite the fact that he hasn't got any gloves.

Just one look at the graphics and you know exactly what you're in for. Millions of other games spring to mind – Mario, Rainbow Islands, Mega Man, Alex Kidd, Mega Twins, New Zealand Story, the list goes on and on and on. Cutesy platform romps with all the usual trimmings. Kidnapped princesses, end-of-level baddies, power-ups, hidden goodies – it's all here.

Where Kid Gloves 2 falls flat is that as well as being derivative, it lacks the glossiness that makes, for instance, Mega Twins a good laugh. It looks and plays like an 8-bit Nintendo reject.

You can just imagine some spotty, gum chewing, MTV generation yankee nerd playing this while listening to the new Paula Abdul album. Not the sort of ultra hi-tech home computer entertainment us smug, superior, stiff upper lip Amiga owners are used to.

There are some attempts to beef it up with the inclusion of little arcade subgames and one-armed bandits lurking in the scenery, and while this is a nice idea it doesn't really offer anything of use – especially since I've got a nasty feeling that the fruit machines are a bit rigged. And the arcade machines are pretty crap as well.



Sitcom heart-throb, Paul Nicholas in platform game romperama!

The graphics are, as you can guess, cute. But cute in an old-fashioned way. The sprites lack the crisp, colourful definition of their rivals and as such leave the game feeling a bit dated.

Another rather odd graphical feature is the lack of any backgrounds. At least, any backgrounds worth noticing. Lots of white dots for snow is about all you'll get on the first level, and it only gets a bit better as you go on. It all looks a bit sparse.

Sound is actually quite nice. There's yer standard cute platform game boings and beeps, but there's also some pretty nifty speech when you pick items up. For instance, when you collect some wine, Kid emits an ecstatic "yum yum!". It's a nice little touch, and it does give the game a teeny bit of much needed Pzazz! But Kid Gloves 2's biggest problem is that it brings nothing new to an already overstocked genre. Mega Twins manages to justify its existence by being slickly programmed and by having a great two-player mode, but the Kid (née Beau) would probably have been happier if he'd been left to wander about in software limbo last year.

Who knows, maybe he could've met up with Monty Mole and Miner Willy and formed an obsolete platform characters club. But they probably wouldn't have him. They're very strict about things like that.

Daniel



Blimey, these keys pop up in the handiest of places!



Find an arcade machine and you can indulge in this exciting shoot-'em-up. Irony, doncha just love it?



Oh! It's an edge-of-the-seat leap for survival! Go Kid Gloves, go!

VISION
Not a patch on its rivals. A worryingly 8-bit feel.

AUDIO
Cutesy speech, but little else of note.

PLAYABILITY
A certain rustic charm, but too basic to make a lasting impression.

ADDICTION
There's better available. Far from original and no gloss

63%

Trench coats at the ready...

CRIME CITY

IF... ▪ £29.99 ▪ ½ meg ▪ Mouse ▪ Out now

If you want a really good laugh, then get your hands on the short story that accompanies this little adventure offering. It really is the most clichéd and unbearably bad piece of blurb fiction I've ever read.

Here are some examples: "Maybe one day lady luck would shuffle the deck and I'd get a better hand," and it gets better as well. Check this out: "The girl was about 5ft 6in, with legs that looked longer than that." Brilliant! And finally: "The words hit me like a hard right to the jaw from Mike Tyson." Absolute cobblers, isn't it?

The whole story fiasco is the usual lame way of introducing the player to the plot of the game, although it could have been done a lot quicker, and with a lot less embarrassment, in a few paragraphs. So, to save you the physical pain of rehashing this epic tale, here's the cut-down version.

Your Dad's a private eye, his mate's been murdered, Dad's in the nick, you've got to prove his innocence. There, no need for anything more than that.

The game is similar in style to one of those sport management efforts. You know, you see your desk and you can select different actions by clicking on the telephone, the computer, the diary etc. The number of options isn't quite as great as you might expect, but there's plenty of scope for exploration in your first hour or so.

The manual, despite the crap story, promises great things from Crime City, but the game doesn't quite deliver. Apparently, in you'll become embroiled in the seedy underworld, dealing with hit men and informants and all manner of low life.

And as the blurb tells us that characters' reactions to you will alter to suit the way you talk to them, I was looking forward to a pretty exciting interactive experience. The trouble is that, well, the manual lied. As far as I can tell, the characters responses are as predictable as a BBC sitcom. I mean, I went to my girlfriend's house, and told her we were splitting up. She threw a right wobbler, as I expected. Then I said I'd see her later, she kissed me on the cheek and called me "Cubbywubbykins" or something. Not quite what the manual promised.

If you keep asking the same question, you get the same response over and over. In short, the characters are about as responsive as the scenery. What a bunch of fibbers.

Another way in which the game let me down was its distinct lack of anything even remotely seedy. Even though it's called Crime City, the map makes it look a lot like Trumpton. The seedy bar is more like a cosy country pub and your main character lives at home with his mum. Crime City? More like flippin' Enid Blyton's "Five Investigate a Beastly Murder" if you ask me!

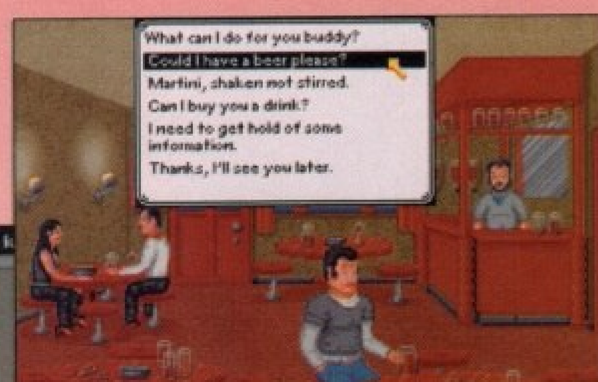
I'm probably being a bit unfair here. Crime City's actually quite good fun. You can while away a few hours making "humorous" phone calls to the local bobbies, or making dates with your girlfriend that she never even shows up to.

The trouble is that the action is repetitive, making the whole game feel about as involving as watching someone else's holiday home video. A nice idea, but Cruise for a Corpse did it first and a million times better.

Daniel



Top news tonight – some bloke is accused of murder. Exciting eh?



Straight darn the pub for a few pints, but at two quid a go you'll be skint before you know it!



Snooping around the scene of the crime is the obvious way to start



No half-empty coffee cups? No Kinder Egg toys? This can't be the Gamer office..



Where to next? And more to the point, how much will it cost?

VISION

The graphics are OK, but fail to create any atmosphere at all.

AUDIO

Cheesy tunes and no FX worth mentioning.

PLAYABILITY

Quite amusing at first, but boredom soon creeps in.

ADDICTION

A reasonable whodunnit, but very limited in the long term.

50%

Biffa's cheat mode



Biffa and Sean Griffiths of the Bitmap Brothers continue the official guide to the hardest sections of Magic Pockets

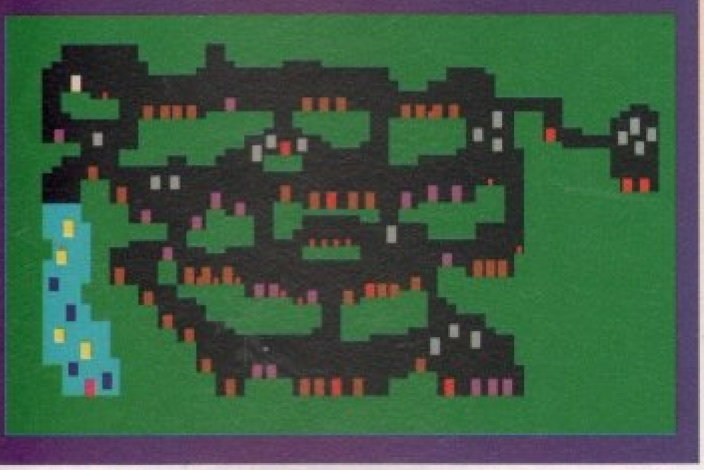
MAGIC POCKETS



The Lakes – section 3

This section is tough. Go forward first and kill the crabs and the vultures. Drop through the gap and use the drill to turn all the nasties into power-ups! Now drop down again and pick them up. Keep dropping down to get to the bubble gum. Drift up to the very top again and move right – here there are some coins, a gold star and a secret passage.

Ensure that you get a mega power-up of some sort. This will give you the edge – you'll need it! Travel left and clear the nasties by the top of the water. Now roll down the "stairs" towards the bottom of the pit and move right to pick up your helmet. Go into the water, but move slowly – there are a lot of nasties in this small cavern. The secret rooms are full of 'em – sneaky eh?







The Lakes – section 4

This is a very big pit. You can travel down the left gap or the right gap – there is little difference bar some bonus fruit to the right.

The best technique here is to jump off ledges and spin into nasties. The helmet is in a cavern directly under the TV. If you pick it up now you may have some trouble – you cannot spin with it. Take the right-hand pit, and follow the arrow to the exit.

If, however, you feel adventurous, leave the helmet and drop left to find a pit with power-ups, fireballs and a bubble gum machine. This way you can clear loads of nasties and drift back up to the helmet – much more fun!





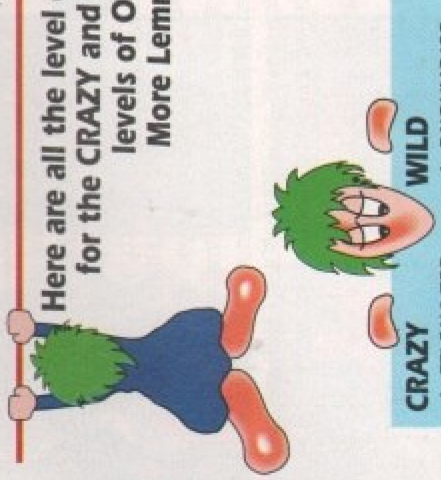
PUZZLE AND QUIZ

GAMER HAKPAK

Oh No! More Lemmings

Psygnosis

Here are all the level codes for the CRAZY and WILD levels of Oh No! More Lemmings



CRAZY	WILD
1. TFLCAHVFBD	1. BAIQUMOJCO
2. FLCIHUTGBL	2. IIPWMICKCD
3. NCALWTFHBM	3. MPUEMCCLCM
4. CKLTTGNIBF	4. PUDMCKLMCD
5. CCHSUFLJBH	5. UEMCCHWNCO
6. IHSUFLCKBO	6. LICOITWOCO
7. LRUGLCCLBN	7. OCCLVUEPCH
8. RUGLCKLMBG	8. CKLWUEOQCR
9. VFNCAHUNBN	9. CAHRTGMBDP
10. FLCKHWUOBI	10. IHSTFMCCDI
11. NCAMUUFPBE	11. MSVFICADDE
12. BIMTUNLOBR	12. STGOCILEDR
13. CEHPTDOBCP	13. VOKCCHVFDR
14. KHPTLICCCI	14. NKCOHWVGDO
15. LSVLICADCI	15. ICCLVVOHDF
16. RVLKCKMECF	16. CKMTTOIIDL
17. TDOCCHWFCI	17. CCHSUGOJDN
18. DOCKITTGCP	18. IHRUFOCKDS
19. ICAMVVMHCR	19. LQUNICALDQ
20. CIMUVLICI	20. QUGMCIMMDH

Biffa's cheat mode

Part two







MAGIC POCKETS

The Mountains – Section 6

This section features a lot of long ledges. Move right and left along the ledges and throw snowballs forward, avoiding the clusters of nasties. Watch out for the Yetis that jump at you – they only take one hit.

Climb over the building and jump on the aggressive rabbits and snowmen beneath you. Move left and push snow over ledges wherever possible. Don't miss the spiky helmet hidden behind a column on the left by the wall.

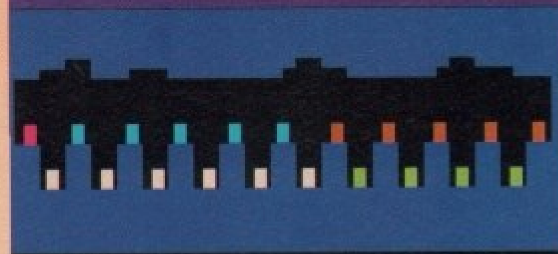
Use the helmet to the full and take out as many snowmen as possible. Don't drop off the edge and keep moving until the helmet runs out. At the bottom get the hopper and bounce over the ledges to get to the exit. Be careful not to jump up to the top again.



The last room

Run to get a hopper, or blast the snowmen to drop one. Then collect your massive bonus and exit.

Well done, you have finished Magic Pockets – applause all round!



The endgame world

Transport to home

Using you skills, create one silver star and one gold star to transport to the end room. You'll need your wits about you as it can be quite tricky. First collect 5,000 points, ensure you burst to clear the kill count and trap for a silver star.

Then, kill the remaining ten nasties. Make sure there are ten left – there are ten from the first hare!. Then trap to get a gold star and transport. Don't hang around, because the bubble will come, and this time it kills.

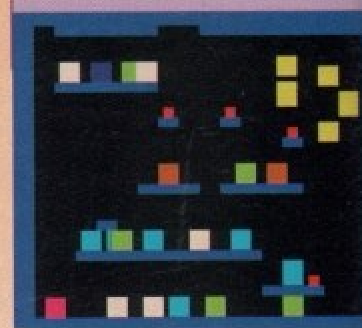
The Mountains – Section 7

The penultimate level and the hardest in the entire game! If you're super-powered you could do this level, otherwise you are going to die!

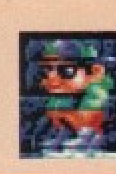
First of all, stand and fire until all nasties are dead. Now edge forward and keep firing. Some Yetis will fall from the top – kill them and edge forward. Ensure you stop the bonus on milk, to get some extra life.

Again edge forward. A good technique is to jump up to the ledge with the coins and spin off the end. Always watch for nasties falling from above. Where the coin piles are beware of the eagles. Now the exit should be easy.

Note – If you can, transport in this room, to wrap the game!







THE DREAM TEAM
man with the stick- richard "paddock" williams
top criminologist - daniel "pluko" whitehead
elvis impersonator - eddie "angela" mckendrick
professional slacker- the biffster
loud noises - phil "pheep" morse
style gurus - terry "the" thiele
eddie "executive" mckendrick
soundtrack - the stuffies
sex symbol - tank girl
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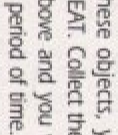
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SHOOT 'EM UP

GAMER HAKPAK

Robocod

Millenium



Before you enter any of the levels, you will see a Cake, Hammer, Earth, Apple and a Tap. If you take the first letter of each of these objects, you will notice they spell CHEAT. Collect these in the order mentioned above and you will be granted invulnerability for a short period of time. Also, if you go into the first world you will notice another five objects which spell LIVES. Collect the LIPS, ICE CREAM, VIOLIN, EARTH and SNOWMAN in that order and you will be granted infinite lives.



Darkman

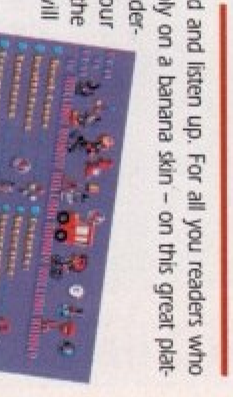
Ocean

Another bobbins game by Ocean, but for anyone out there who bought it here's a little cheat anyway. At any point in the game type in MEACULTA and the cheat will be activated.

Rolling Ronny

Virgin

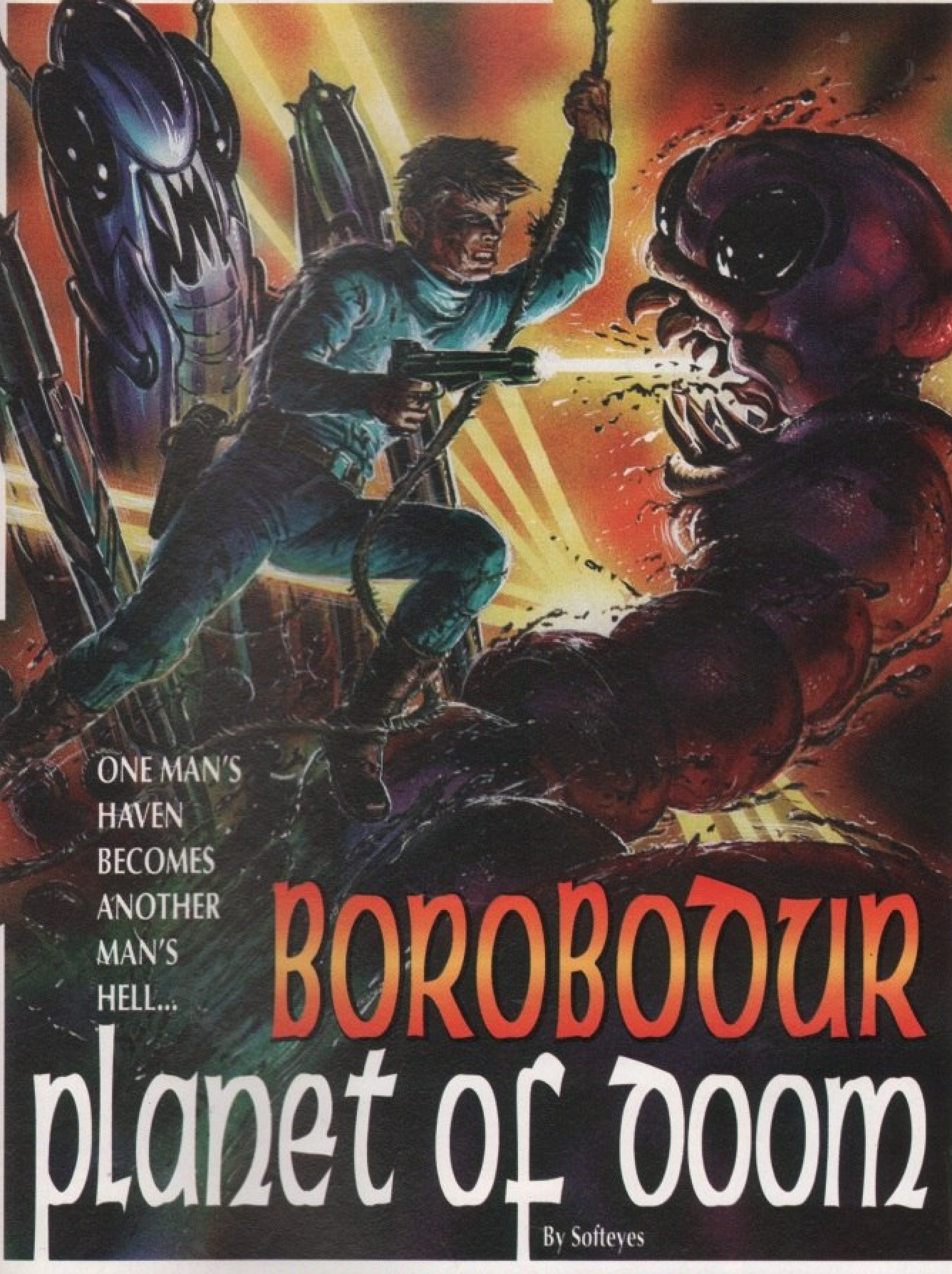
Oi, stop clowning around and listen up. For all you readers who are slipping up – probably on a banana skin – on this great platform game, here's a wonderful cheat. By typing your name in as CHEAT on the high score table, you will be able to fly.



HAKPAK

It's a crying shame but the pert and buxo HakPak binder have now sold out, so don't send in for any more. If enoug of you moan though we might get some more

HAKPAK



THALAMUS

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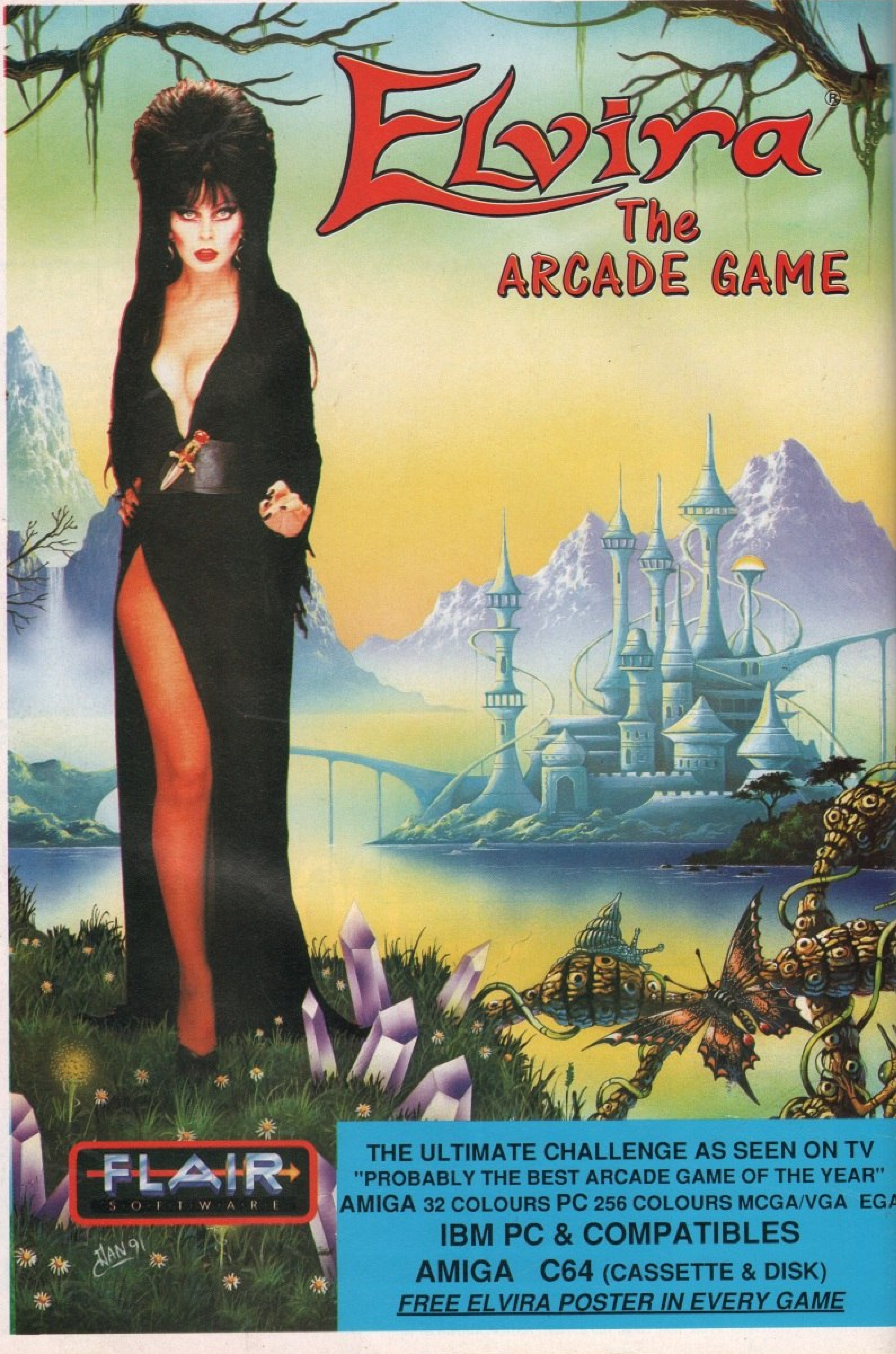
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PUBLIC sector

A discerning choice of disks covering everything from screen savers to language tutors. Steve Williams sorts the goodies from the garbage

Mice and Blankers I & II

George Thompson Services

As the magician said to the actress, "now you you see it, now you don't". Alas, when it comes to images on a monitor, that's not quite the case.

Once you've powered up your computer and switched on your monitor, the electron gun that sits at the back of the cathode ray tube constantly fires particles at the phosphor dots on the front of the screen, making them glow.

This is a good thing because unless these particles make the phosphor dots glow, no image will appear on your monitor. For the poor little phosphor dot, though, it's a bad thing, because every time it gets hit by an electron its life expectancy is shortened.

Now in the short term this isn't much of a problem, in fact it is the reason that phosphor dots exist – they like being hit by electrons. Problems arise when only certain members of the phosphor dot community keep getting hit. It means that they age far quicker than their neighbours.

As is the case with most humans, the older they get, the harder they find it to get excited. The effect is called screen burn. We see it as areas of the screen that have dark bands or shapes on them.

If you cast your mind back about ten years or so, you'll remember that the earliest home consoles used to use the television to display video games. One of these was a game called Ping-pong.

The screen was divided into two areas by a static, vertical white line. Each player's score was shown in the top right and top left-hand corners of the screen. It was a simple enough game – each player had a paddle which controlled a movable bat and the idea was to bounce a ball back to your opponent without letting it slip past your bat.

It was great fun and it literally kept the kids amused for hours at a time. But when the adults sat down to watch television in the evening they found that their favourite TV programme suddenly had a dark line running vertically down the centre of the picture, and two dark areas, one in the top left-hand corner of the screen and the other in the top right.

This was due to the dreaded screen burn and, as many poor parents found out, the effect is irreversible.

The same thing happens with computer monitors if they are left with the same image burning itself into the phosphor screen for too long. It's the static elements of the display that do the damage.

So what can be done to prevent wearing out your screen? Well, you could turn your monitor off every time you got up to make a cup of tea or went to answer the phone. But all those additional power surges that occur when you switched the monitor back on again would shorten its life even more.

What would be useful would be a program running in the background that monitored the activity of the keyboard and the mouse. If it found that the computer hadn't been touched for a while it could tell the electron gun to switch itself off for a while, without turning the rest of the monitor off.

And that is why we have programs known as screen blankers to do just that. You instruct the program how long it is to wait after the last time the computer was touched before it blanks the screen, and it carries the task out without fuss. Place it in your startup-sequence and you won't even be aware that it's there until your monitor needs it.

There are many variations upon this original theme. One screen blanker and mouse utility, Mighty Mouse, waits for a preset time and then dims the screen by a user-defined percentage. If after a little while longer there is still no user input then it continues to dim the screen in stages until eventually it is totally blacked out.

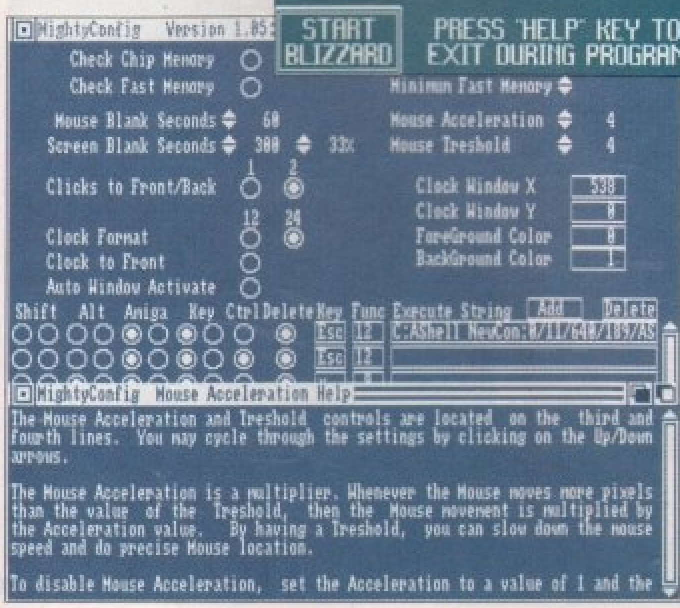
Blizzard is another variant, and a personal favourite of mine. This blanks the screen but then displays huge, multi-coloured snowflakes gently falling down it. StarBlanker turns off the screen and replaces it with the view of a starfield scrolling slowly by.

Although screen blankers are deeply useful programs to have, there's only so much fun to be had from them and so programmers started to combine them with other small utilities to avoid having to run too many individual files.

Screen blankers started to be combined with mouse pointer blankers and mouse pointer accelerators. The list just grew and grew and everyone had his or her favourite.



Full marks for ease of installation, it's as simple as clicking on a few buttons



Mighty Mouse is probably the easiest screen blanker and mouse accelerator to configure because of its Intuition user interface

There are lots of these utilities floating around in the freeware and shareware scenes. They all have various combinations of screen blanker, mouse accelerator, window manipulator, function keys, macros, and even clock support. If you wanted to test each one out to find out which suited your needs best it would cost you a lot of money to buy up all the disks.

In order to save you time and cash, Seppi Evans at George Thompson Services has come up with a compilation of 20 mouse handlers and screen blankers.

It comes on two disks and contains all the familiar names – DMouse, Mightymouse, Blizzard, Autopoint, Mouse accelerator, NextWindows, Spliner, fBlanker, PBlanker, FMouse, Blankette, FracBlank, MachIII, QMouse, Mouseblanker, Zoom, Mackie, the Workbench 2.0 PBlanker and Clock DJ.

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FF-579 BINTOHUNK: A utility to convert a raw data file (text, bitmapped graphic etc) into an Amiga hunk format object file that can be linked using Blink.
FF-580 WORLDDATABANK V2.2: Using a database of co-ordinates compiled by the CIA and made available under the freedom of information act, this program plots world maps in cylindrical or spherical projections with various degrees of magnification. Includes the largest available data file for detailed mapping of even small sections of the globe. Disk includes source code.
FF-589 TERM V1.9c: A telecomunications program with some nice features, including an ARexx port, external process communications, XPR support. Programmable function keys, postscript downloading to laser printer, phone book, programmable panel buttons, public screen support etc documentation in English and French. Requires dos 2.0 an update to Term 1.8A which received a 10/10 rating in Amiga Shopper.
FF-591 VIM: A clone of the Unix test editor "vi" very useful for editing programs and other ascii text has many options including multilevel undo, command line history, ability to edit binary files, yank buffers etc.
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LPD-029 BIG TOP FUN: A top quality educational program three games based on circus acts. 1 meg.
LPD-037 ROCKET MATHS: A game designed to aid children with their maths. Various levels of difficulty may be set.
LPD-039 MAGIC FOREST II: Version 1 was given away free with Amos this program is far superior and continues the story set by version 1. 1 meg.
LPD-041 RESCUE: A 3D adventure in which you must solve a murder. You can click on objects and examine them for clues etc excellent game.
LPD-042 X-STITCH: Prints out your pictures in the form of a cross stitch pattern for embroidering.
LPD-044 FORMULA 1 CHALLENGE: A very comprehensive racing car game for one to four players.
LPD-047 DIRTY CASH: An excellent fruit machine game with all the normal features like hold, gamble, nudge etc.
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LPD-057 KIDDIES CLIP ART: Lots of good quality clip art designed with children in mind. Can be used in your favourite graphics package.
LPD-061 THE FINAL CHAPTER: An 3D interactive graphic adventure. I did not get very far but the bit I did was quite impressive.
LPD-065 POWER PLANNER & DIARY CHECKER: A database in which you can store telephone numbers and addresses etc also a diary to help keep track of appointments.
LPD-067 CYADONIA (CYAD II): The follow up to Cyad with improved graphics and even more devious puzzles, very addictive.
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PS-014 CLASSROOM MATHS: A selection of Mathematical games so your kids can learn and play at the same time.
PS-015 CRYSTAL CAVERNS: A follow up to space blob with more levels and oh no more monsters.
PS-020 AVINA BLUE: A very good horizontal scrolling fast action shoot em up to test the best of reflexes.
PS-021 CHALLENGE OF THE MATRIX: Puzzle type game where squares are removed by moving over them, sounds easy but there are obstacles, and one wrong move can mean sudden death. Watch out for the bonuses!
PS-022 SPECTRUM: This one seems to be a mixture of two classic Space invaders and breakout. With good graphics and nice sound effects, it's definitely one for your collection.
PS-023 I AM THE WALRUS: This ones not a game, it's a musical animation featuring an unusual rendering of Lennon and McCartney I am the Walrus.

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UT-064 COMPLETE C MANUAL V2.0: 4 disks each one about 98% full. A must for any one wanting to learn C. Executable examples along with the source code to take you through screens, gadgets, windows etc. On disk documentation shows how to use a compiler, how to link code etc a very useful tutorial.
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UT-174 TEXT ENGINE & AZSPELL: A very nice wordprocessor along with spell checker.
UT-097 NORTH C V1.3: (2 Disks) A complete C compiler along with libraries and all.
UT-108 PRINT STUDIO: Will print text with different options. Will also print/save screen & windows or parts of, alter colour palette etc.
UT-109 P-COPY V2.12: A very fast disk copier.
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UT-151 BOOT X V4.1: (500 only) read next entry.
UT-152 BOOT X V4.1: (500+ only) An excellent (probably the best) and easy to use virus killer for the Amiga also on this disk is LVD which works alongside Boot X to give even more protection.
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GA-126 CARD SHARP: A collection of solitaire type card games professionally presented.
GA-129 MIND GAMES: A collection of 21 games, a couple of which do not work on the plus but the disk is still well worth having.
GA-131 SUPER SKODA CHALLENGE: For two to four players and great fun trying to get into position to blast one of your opponents without being blasted youself.
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Pass the magnifying glass, mother, I want to have a look at my IFF collection in PicBase

TBAG Disk number 59

Amiganuts

The Tampa Bay Amiga Group's Disk of the Month is something I regularly look forward to receiving.

TBAG disks always contain an interesting mixture of programs and they nearly always have something that I can find a good use for. Take disk number 59 for example. There are five utilities, a demo, three cracking pictures, and a game.

AvailMem is a small routine that watches memory usage and, unlike the AmigaDos Avail command, continually updates its display as the memory use changes.

Interferon, written by Gary Milliorn, is a cute little game that is a variation on Tetris. You have to match up colours to destroy the bugs on the screen. It uses 16 colours and has some sound. Nothing to write home about but it's an added bonus.

Opt is a drive optimiser, sometimes known as a defragger. So why is it necessary to optimise in the first place? Well, when you use a disk for the first time after formatting, it is, in a manner of speaking, a blank piece of paper. If you save a 100k file to this new disk there is enough room to save the file in one complete chunk.



As time goes on the disk gets lots of files written on to it and erased from it. Eventually if you tried to save another 100k to the disk there might not be a single space available to store the file in one whole chunk, so the drive saves a bit of the file here, another bit there and so on until the whole 100k has been fitted on the disk.

When it comes to loading that last file back into the computer, the drive remembers where all of the pieces of it are and moves its read/write head around the disk, picking them up as it goes. This is clever stuff, but unhappily it takes longer to load in a fragmented file than a file that exists as one chunk.



If a disk has seen a lot of action, the amount of file fragmentation will be extensive and loading/saving times will be seriously slower than those of a new disk.

This is where defragmentation (defragger) programs become useful. A defragger looks at the files on a disk and rearranges their physical position so that each one is saved as a continuous chunk of data.

Defraggers really come into their own when used with hard drives. Floppy disks can be optimised a lot quicker by copying individual files on to a newly formatted, blank disk.

Opt can optimise hard drives, RAM drives, or even floppy disks if you want it to. But – and there's always a but – although defragmenting is a desirable thing to do, it can also be slightly hazardous. Even if the program is supposed to be 100 per cent foolproof, a sudden power cut could mean the total loss of data – so it is always advisable to make backups before defragmenting.



Freddy's dead or so they say. He looks very much alive in this IFF from TBAG 59

Opt has been written to try to provide the most dependable disk optimisation possible. It only shuffles one disk block around at a time to make certain of this. This means that it's slower than other optimisers which generally move complete tracks at a time, but it also means that if something does go wrong the amount of information lost is minimised.



Another TBAG 59 picture, the Enterprise may get updated but the Klingons are still flying around in the same machines they were using a century ago

The display is a clear, no-nonsense panel that contains four buttons and five small report windows situated underneath a large window that provides a schematic view of the disk layout.

Also on the disk is PicBase, an IFF picture database program written by Mike Berro. It's a smashing idea – it allows you to catalogue and manipulate all the IFF pictures and brushes that you have on a disk in the same way that a conventional database manipulates data files.

The program displays a reduced replica – or icon – of each picture, with information such as the path name, the creation date, file size, image size and depth, display mode, and comments about the file.

Four icons are displayed at any one time, and they can be scrolled in real ➤

time across the display area. Pictures can be automatically sorted by creation date, file size, filename, path name or something known as a Ticode.

The files can be renamed, transferred, duplicated or erased from disk, either individually or in tagged batches. Double clicking on an icon will expand it to full size.

You don't even have to run the program if you want to get at some piece of information quickly. A list of pictures can be printed out, or saved to disk as an Ascii text file.

There is a special multi-view facility which allows you to see up to 108 images at once – handy for hard drive users. In reality they are so small that unless you have a good idea of what the picture looks like full size, identifying them is difficult.

Images can be presented as a slide slow, moving automatically or manually forward and reverse. They can also be played back in reduced size mono form as an animation preview, at up to 30 frames per second.

There's even an example file that comes with the package, so you can play around with one that's already been set up before you create a new one of your own.

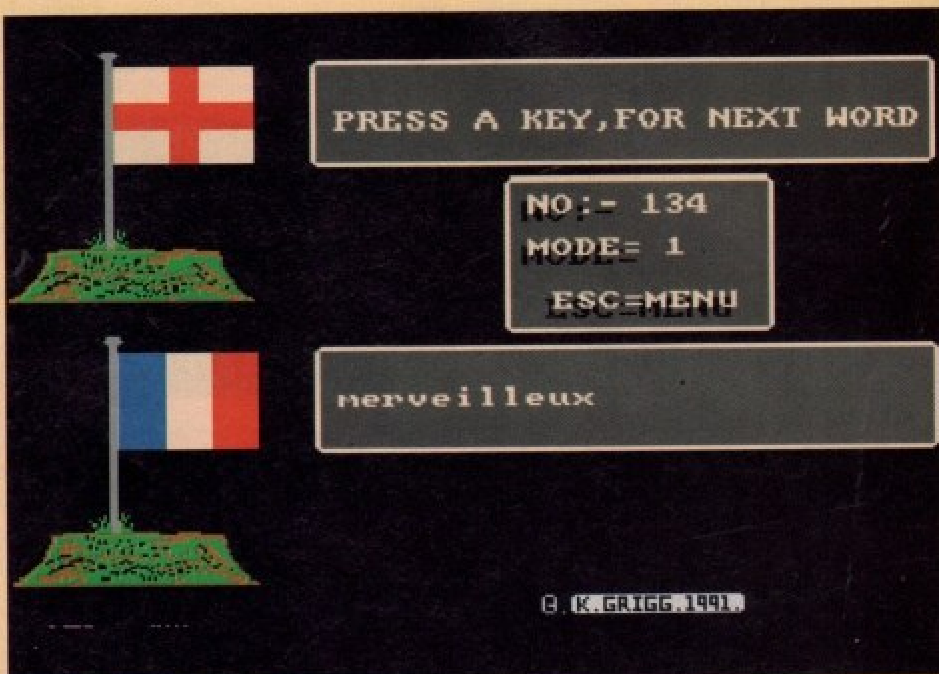
The Europe-friendly Languages Tutor

One of the things that doesn't make me proud to be British is the inability of the average citizen to speak in any other language than English.

Languages Tutor is a teaching aid program that helps you learn to recognise a moderate number of written words from the languages of four European countries – Spanish, French, German and Italian. It works by putting an English word up on the screen and then, when you press the Return key, displaying the foreign equivalent of that word.

There are a couple of variations upon this theme. The program can substitute a foreign word for an English one and you have to guess what it means. Each language has a dictionary containing some 270 to 300 commonly used words and the program pulls words out at random unless you tell it to take them out in alphabetical order.

There are no fancy graphics, animation sequences or special effects in this program – they're not needed.



Languages Tutor ... lo-res graphics but hi-res learning

This is one occasion where the Amiga's fancy footwork is not really required to get the job done.

Languages Tutor is not going to teach you how to speak a language but it will be a handy aid to have around if you are taking GCSEs or attending an adult education course.

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U20 – **Master Virus Killer** *V2.1* – V.Good
U25 – **Fonts & Surfaces** – Cut and Paste
U32 – **C-Light** – Lapsed commercial Tracer
U33 – **M-CAD** – Computer Aided Design pack
U35/6/7 – **Darkstar Utils** – Nos 2 to 4
U38 – **Assassins Boot Utilities** – Excellent
U42 – **SID** *V1.06* – The *only* directory util?
U43/4 – **Catalogue Workshop** – Rather good
U45 – **52 CLIP IT!** – 8 disks full of clipart
U54 – **Hard Disk Utils** – Wouldn't be without
U56 – **TSB Vector Designer** – For RSI fans
U57 – **Messysid** *II* – Ultimate in transferers
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U61 – **Intercostal Utils** – Brilliant disk
U62 – **Quickbench** *V1.1* – Bootable RRAD
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U70 – **Darkstar Utils 5** – Yet another!
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U83 – **Sculpt 3D Scenes** – For Sculpt owners
U85 – **ESA Utils 1** – Brilliant disk
U86 – **Full Force Utils 2** – Seventy Utilities
U87/8 – **Graphics Management**
U90 – **Geneology database** – Needs 1 meg
U93 – **Spectra paint** *V3.2* – Brilliant rival
U94 – **Opti Utils 1** – Excellent quality
U98 – **104 High Quality Clip Art** – 7 disks
U118 – **Pendle Europa Utils 7** – Excellent
U119 – **Diskmaster** *V3.2* – Directory Utility
U121 – **Spectrum Emulator** – Rather good
U131 – **Assassins Multivision** – GFX tools
U136 – **Electrocad** *V1.4* – Latest version!
U143 – **SuperKillers** – **BOOTX** *V4.03* (1/1/92)
U144 – **HamLab** – Iff conversion prog
U145 – **Total Utils 1-20** – Utilities
U153 – **Xenon Utils** – Seventy-five utilities
U156 – **Garfield Clipart** – Useful stuff?
U159 – **A64** – Autobooting C64 emulator
U160 – **RSI Extras** – More bobs, sprites etc
U161 – **Anthrox Utils** *V5* – Recommended!
U162 – **Deflex Utils 1** – Unusual collection
U170 – **Icon Magic** – Excellent programme
U172 – **DTP** – *NEW ENGLISH VERSION*
U176/7 – **WindowsBench** – By MikeSoft (ta)
U188 – **Programming 1** – Lots of info
U192 – **Night Flyers 4** – Excellent disk
U195 – **Opti Utils 2** – Latest version utilities
U196 – **Opti Comms** – ***Ultimate*** Comms disk
U197 – **C Dir Tools** – Stuffed full of them!
U200 – **Imploder** *V4* – **Latest Release**
U207 – **Printer Utils** – By the Assassins
U209 – **Dynamite Fonts2** – More cut n paste
U210 – **RSI VECTORBALLS EDITOR**
U211 – **RSI VECTOROBJECT EDITOR**
U212 – **RSI FONT EDITOR**
U213 – **Crossword puzzle creator**
U214 – **Print Studio** – Excellent utility
U218 – **Devpac Source codes** – Very Good!!
U220/1 – **North C Compiler** – Brilliant
U222/3/4/5 – **C Manual V2** – Excellent
U226 – **Gelignite fonts** – 52 C+P by Mark
U230 – **Converters** – Only one you need!!!
U231 – **Crunch n Copy** – By the Assassins

EDUCATIONAL & GAMES

G01/2/3/4/5 – **Ed-Pack** – Teenagers & over
G06/7 – **Learn & Play** – Infant + junior age
G20 – **Turrican II Demo** – Playable demo
G22 – **Tennis** – 3D game, needs 1 meg!
G31/2 – **Star Trek** – By Tobias Richter
G35 – **Board Games** – Includes Monopoly
G38 – **Frantic Freddy** – Good arcade fun
G39 – **Flaschbier** – Excellent game
G41 – **Amigaman** – Chess *V2* also drip
G43 – **Megaball** – Brilliant breakout clone
G44 – **Wacko Jr in Wonderland** – Brilliant
G46 – **Seven Tiles** – Good Speedball clone
G47 – **Wizzy's Quest** – Very nicely done
G50 – **Shapes** – Absolutely brilliant for kids
G52 – **Merv the Merciless** – Excellent
G53 – **Zeus** – Very addictive tile game
G55 – **Sealance** – Sub strategy type game
G62 – **POM POM Gunner** – *Very Good!*
G63 – **Hollywood Trivia** – Quite good
G64 – **Mental Image 1** – Best PD selection
G69 – **Darkstaff** – Written with speccy emul
G70 – **Skier** – Excellent game
G72 – **Snakepit** – Suitable for the kids, good
G73 – **Blockit** – Very nicely done by EP
G75 – **Card Games** – A choice of three
G76 – **Ready Robot** – Educational pre school
G80 – **Peter's Quest** – Lovely graphics
G82 – **The Maze** – Incredible 3D maze
G83 – **Tomtespelet** – Needs two players
G87 – **Llamatron** – Brilliant by Jeff Minter
G89 – **Chinese Checkers** – Addictive game
G90 – **Mayhem** – Similar to Datastorm
G91 – **Insiders Club** – Stock Market strategy
APD59 – **Super Quiz** – Excellent quiz game
APD62 – **Arcadia** – Nice breakout clone
APD110 – **Crossfire** – Very nicely done
APD115 – **Baloonacy** – Superb for the kids
APD130 – **Wooden Ball** – Brilliant!!!
APD137 – **Tile Trial** – Good tile game
APD142 – **Pair Crazy** – Very good
APD146 – **Fruit Machine** – For the addict
APD148 – **Demolition mission**
APD149 – **Gobbit/Pontoon** – Both good
APD178 – **Mastermind/Pairup** – Good
APD180/1 – **Dungeon Delver** – Brilliant
APD182/3 – **Pixie Kingdom** – Very good
APD314 – **Blackjack Trainer** – Superb
APD315 – **Silver Bars & The Enemy**
APD326 – **Hyperball** – ***Best yet, get it***
APD329 – **Fruit Machine** – Brilliant game
APD334 – **Snake in the Grass** – OK

BUSINESS & SERIOUS

B02 – **Wordwright** – Wordprocessor
B04 – **Clerk** – Accounting
B06 – **U-Edit** – Very powerful wordprocessor
B07 – **FleKsibase** – Powerful yet easy to use
B08 – **Rim Database** – More involved
B09 – **Amibase** *V3.76* – Excellent database
B10 – **Inventory & Memopad** – Very handy
B12 – **Business Card Maker** – Pretty Good
B14 – **Visicalc** – Similar to Lotus 1-2-3 on PC
B15 – **MicroEmacs** – Text editor + S/checker
B17 – **QED** – Superb text editor
B18 – **Textplus** *V3.0E* – Edit crunched files!
B19 – **600 Business Letters** – Brilliant
B21 – **BBase II** – Easy to use database
B22 – **DataBase Wiz** – Name & address
B23 – **Textengine V3** – Quality W/Processor
B30 – **AMIBASE PROFESSIONAL II**
APD36 – **Amos updater V1.32**
APD52 – **Forms Really Unlimited**
APD132 – **Family History Database**
APD138 – **Spanish Tutor** – Pretty good!
APD176 – **DataBase Master V2**
APD257 – **Cassette Labeller** – For the inlays

SLIDESHOWS & PICS

P05 – **Pendle Europa Slideshow** – V. Good
P09 – **Sunslide II** – Exceptional quality
P11/2 – **Nasa Slideshows** – Both 1 & 2 here
P25 – **Roger Dean** – Excellent slideshow
P28 – **Sunslide III** – Brilliant follow up
P32 – **Agatron 6** – From Tobias Richter
P33 – **Agatron 8** – More from TRs stable
P41 – **Nemesis Prologue** – From Hanibal
P47 – **Joe Slideshow** – Exceptional artwork
P48 – **Psygnosis Slideshow** – Rather brilliant
P62/3 **Channel 42 & Silents** – Very good
P65 – **Agatron 12** – Fantastic quality
P66 – **Fraxion Future Visions** – Very good
P67 – **Agatron 11** – Incredible standards
P76/7 – **Nemesis Chapt. 1** – The next chapter
P78/8 – **Laurel & Hardy** – Brilliant for fans
P83 – **Invisible World** – Bugs n things
P85 – **Robocop** – By Hanibal, *Unbelievable!!*
P89 – **Art for Arts Sake** – By Hanibal, Brill
P91 – **Pixelium** – Absolutely superb
P93/4 – **Star Trek Megademo** – 1 Meg min
P95 – **Rick Parks Art** – Quite incredible

ANIMATIONS (most 1mb)

A06 – **More Aerotoons** – By Eric Schwartz
A10 – **Batman** – This is brilliant (by ES)
A11 – **Puggs in Space** – Brilliant
A12 – **Probe** – The most famous of all anims
A17 – **Stealthy II** – Excellent little animation
A19 – **Star Trek Fleet Manoeuvres** – Good
A20 – **Agatron 26** – Dry dock
A13 – **Agatron 2** – Includes F15 fighter
A48 – **Busy Bee & Tree Frog** – Very good
A49 – **Fractal Flight** – Small screen anim.
A58 – **Walk** – Brilliant chrome legs walking
A61 – **Agatron 15** – Billiards & Lotus + F15
A62 – **Stamp Collector** – Brilliant sequence
A63 – **Juggler II** – Very, very funny. See it!
A67/8/9 – **Station at Kerne** – 2 Meg
A70/1/2 – **Lost In Space** 2 Meg
A76 – **Agatron 30** – Millenium Falcon
A77 – **Agatron 17** – Twok and Menseh
A78 – **Agatron 24** – Kull and ping pong
A79 – **Agatron 33** – Probe & bird of prey
A81/2 – **Walker & A1000** – 2 Meg
A83 – **Discovery Shuttle** – Very good
A84 – **Agatron 36** – Bird flight
A87 – **Car** – Lotus & Unicycle, brilliant
A88 – **Bunsen Burner** – Brilliant 3D flight
A89 – **Agatron 22** – Includes aproach + more
A90 – **Agatron 20** – Belle Huey Helicopter
A91 – **Franklin the Fly** – Needs 2 drives
A94/5 – **X-Wing** – Rather brilliant sequence
A96/7 – **Light Cycle** – From Tron and Brill!
A98/9 – **Anti-Lemmings** – 2 Meg
A100/1/2/3/4/5 – **The Wall** – Exceptional
A107/8/9/10 – The Landing – 4 Meg
A111 – **Mars** – Absolutely incredible, get it!
A112 – **Juggette II** – Another hilarious anim
A115 – **Agatron 27** – Book and others
A116 – **Agatron 28** – Disconnect, Beautiful
A117 – **Agatron 29** – Millenium Falcon
A124 – **Shuttlecock** – By Eric Schwartz
A126 – **Real 3D Anim** – "Real Pinball"
A127 – **Real 3D Anim2** – T-Pot and balls (?)

MUSIC

M01 – **Sound Samples** – Includes perfect sound
M04 – **Vangelis** – Brilliant music & graphics
M10 – **Jean Michel Jarre** – With good pics
M18 – **Amigadeus** – By Rod Baxter, Brill
M19 – **Classix 1** – Mr Baxter strikes again!
M20 – **Classix 2** – More of his formidable work
M35 – **APDL 28** – ***MIDI UTILITIES***
M42/3 – **Soundtracker** *V4* – Excellent
M52/3/4/5 – **Modules** – Need I say more?
M58/9/60 – **Metal Modules** – Good
M61/2/3 – **Sound samples for S/Tracker**
M88 – **Pendle Europa 6** – Excellent disk
M105 – **Burning Independence II** – Brill
M115 – **Scoopex Music Utils** – By the score
M131 – **Deluxe Music Data** – Needs DM
M134 – **Kefrens Jukebox** – Good
M145 – **Midi Programmes**
M152 – **Midi Programmes** – More
M165 – **MED** *V3.2* – ***Latest Edition!***
M169 – **Chip Music** – 43 tracks to hear
M172 – **Audiomagic** *V1.1* – Brilliant utilities
M175 – **Startracker** – 8 track tracker (?)
M186/7/8 – **Do The Bartman**
M192 – **Do The Bartman Re-Mix!!**
M196 – **Powerlords Sound Utilities**
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Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you get the chop.

Where's my A501?

I have two complaints to make. Firstly, when I bought my Amiga in July I got the Screen Gems pack, which I found in your magazine and others advertised as including the A501 512k RAM expansion. However, I never got one. The computer came from Dixons in Newport. The comments in your mag about the extra 512k were in the November issue in the news section, and the same thing was printed in another Amiga mag the next month.

Secondly I would like to complain about the number of swear words printed. Please note I'm only nine years old!

Apart from all the moaning I actually do very much enjoy reading *Amiga Computing*, and it has helped me a lot as a beginner. Keep up the good work.

Martin Mew, Newport, Isle of Wight

I suppose you'll find this cold comfort, but you weren't ripped off, you simply bought the Screen Gems pack before Commodore started to bundle the A501 as a pre-Christmas sales booster. The packs were originally sold with standard 512k A500s, then 1Mb A500s, and finally the A500 Plus arrived in the Cartoon Classics bundle.

You seem to have been unlucky in that you purchased your machine just before the 1Mb bundles started arriving. It's worth checking with Dixons to make sure you weren't supposed to get an A501 with the pack, but if not, then you can't blame them for selling you what they told you they were selling. As for the fruity language, we administered several knuckle raps to persons who will remain nameless, which should spare the blushes of our younger readers. You must remember, though, that game reviews, for example, have to be written with a certain degree of (ahem) passion, and that to tone them down completely would render them staid and uninteresting.

Check out a few of the dedicated games magazines if you're looking for offensive language and sentiments and you'll realise just how refined our writers really are!

Any old disks?

I have owned an Amiga 500 for three years, and in that time I've added 1Mb and an external disk drive. Unfortunately, due to a shortage of funds, I can't do much more with it at the moment. Ah, well, never mind.

I was just wondering (here comes the sales pitch – Ed) if you or anyone else could help me. I've been subscribing to your wonderful magazine since it was first published and I have nearly all the CoverDisks except for August 1989 and May to July 1990. Is there any way possible for me to get hold of copies of these CoverDisks?

I S MacPherson, Sawtry

Ordinarily we'd be unable to help, as we keep back issues for only six months at Europress Direct which are available by filling in the order form towards the rear end of the magazine. However, as you'll notice, we have a brand new Classifieds column for exactly the sort of request you and many other readers make every month.

To take advantage of this rip-roaring new feature, just fill in the Classifieds form and send it off to us. We'll try to fit your appeal into the next available space.

Baron won't budge

I purchased the Red Baron World War I flight sim for my Amiga recently and I thought I'd raise a couple of points about it.

My system consists of a B2000 with 68030/68882 (33MHz), 3Mb of 32-bit RAM, 3Mb other RAM, and a 65Mb hard drive. Obviously not a standard system (I should cocoa! – Ed). On this system, Red Baron runs very smoothly at even the highest detail level, and is more ➤

Trouble with box shifters!

Prize letter

How about running a readers' survey on shops and retail outlets to find out who's good and who's bad, with categories for speed of delivery, advice, price and so on? With this sort of survey, we might start to get a decent service from all shops.

The reason I ask for this is, like many others, I'm getting fed up with being kept waiting on the phone at 50p every three minutes during peak hours trying to wring some support out of companies.

They say they will phone back but never do. We're told goods are dispatched first class, but they rarely are, and most mail orders take at least 10 days.

Prices charged for postage are excessive. You can send a video tape inclusive of padded Jiffy bag and first class stamp for about £1, so why do the mail order shops charge upwards of £2? There's no excuse for this.

I sent three faxes to three different branches of Diamond Computers and not one branch replied. This wasn't the first time either. As far as Diamond's advertisements are concerned, I believe that Diamond are the ones who need to review their policy. After all, they can't offer technical support. They're no more than box-shifters of the lowest order.

My recommended suppliers would be NBS Isle of Wight for PD stuff dispatched first class, and Rubysoft in London for their excellent service. Print this if you dare, but let's have a survey carried out so we can get decent service out of the shops. I guess this will cause a stir, but maybe it will keep your letters page buzzing for a few months.

J Ankin, Milton Keynes

A readers' survey of retailers and mail order companies is an interesting idea, but unless the response was fairly overwhelming it would be unfair to the companies concerned to draw conclusions from it. Having said that, we do receive regular complaints from readers about certain organisations which suggest some are markedly worse than others at supporting their customers.

My advice to you and anyone else experiencing problems with a retailer is to contact them directly by phone at first – I'm afraid you'll have to accept the phone bills – and make sure you get the name of the person in charge. This tends to strip the person of the anonymity of being just a company voice. If a company still fails to respond, you should contact your local Trading Standards Officer. A word from this official source can work wonders on recalcitrant or incompetent box shifters.

Where an advertisement guarantees next day delivery or first class postage, you have the right to expect this service, and it is the job of the TSO to make sure companies live up to their promises and trade in a fair manner.

impressive than on a PC 386SX. This is where the problem lies – on a standard A500, the frame rate is very slow. I know that every magazine is going to review this game badly because of the speed on an A500, but it does state on the box that unaccelerated Amigas are not recommended, and that a hard drive is needed for best results.

The main reason for this situation is that in the USA the Amiga is treated as a serious machine which is also good at games, whereas in this country the situation is the opposite. In the States, the A500 is nowhere, with A3000s and accelerated B2000s the most popular models. I'm not suggesting that you and other British mags should review games on the basis of their performance on these machines as the A500 is so popular here, but I feel they should get a mention.

I have enjoyed a lot of software recently that would not be the same on an A500, either because of the interminable disk-swapping involved or the slow speed, and if faster systems are not mentioned in the press, I feel certain companies will stop producing software for our machines. Please consider non-68000 users in the future!

Iain MacKenzie, London

You seem to have pointed out the problem well enough, but not the source. Most of the very complex simulation games such as Red Baron are now written on IBM-PC compatible machines, then ported across to the Amiga because the market for PC games in the US is now so much larger than the Amiga market there.

The standard PC machine, the 16MHz 286AT, is faster than an A500 (and more expensive!), so some games suffer in the conversion. The result is that a game will often run slower because it has been badly converted, rather than because it is fundamentally more suited to faster machines. The games companies are to blame for much of this. Most of them will convert a game and tweak it so that it runs well on a standard machine, but some don't seem to consider the A500 owners, of which there are millions. Our Gamer editor, Dan Whitehead, agrees that we should (and will) mention where a game is acceptable on a faster machine, but to be honest, the game is reviewed as a product for the Amiga market, and in a market so dominated by 68000-based A500s, it is a bit off for a company to sell a game unsuited to the machine.

If Microprose can manage to make Knights of the Sky smooth and fast with only one disk-swap on a standard A500, why should Red Baron receive an artificially higher mark than otherwise when it is so obviously deficient in these areas? We will mention when a game is better on a faster machine, but don't count on Dan, Jonathan, and Darren upping the score for a game just because it is playable on an A3000.

Pedantry prevails

I write in reply to both I Small's letter and your response to him in February's ESP. Firstly I would like to say that Mr Small was correct in saying that a true multitasking computer requires as many processors as processes.

However, true multitasking machines are few and far between, and even larger machines like VAX 9000s employ task scheduling to give the impression of multitasking. This means that to all intents and purposes the Amiga is as much a multitasking machine as a VAX 9000. To you, Ezra, I would say your definition of multitasking is incorrect. The Amiga is not capable of doing more than one task at the same time. In the truest sense the Amiga uses task-swapping to give the appearance of two tasks running at once.

When all's said and done, I'm being pedantic with you, but only because you should know better.

Andy Powell, Cambridge

Let's settle this once and for all. The Amiga is a multitasking computer, and that's final. The term multitasking was first dreamed up in the mid-80s and applied to exactly the sort of processes the Amiga uses to "give the impression of true multitasking" as you would put it.

Transputers and parallel processing machines weren't around at the time, so the phrase has never meant what you would call "true" multitasking.

This means the definition of multitasking, in microcomputer terms at least, is the process of efficiently sharing and managing system resources so as to carry on more than one task at a time, without seriously impairing the progress of any one task. The Amiga, with its shared libraries and modular approach to system resources, is far and away the best micro in this respect.

If you'd seen the so-called "task-swapping" on Windows 3 IBM machines or the laughable attempts made by System 7 Macintoshes to multitask, you'd appreciate just how good the Amiga is in this department.

After years of development, MS-DOS has only just implemented task-sharing capabilities which would have been unacceptable on even a Workbench 1.1 A1000 seven years ago!

Ezra online

Ezra Surf can be contacted on a whole host of bulletin boards and conferencing systems. If you have anything to say, get it off your chest online!

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DV39 - Magic Forest II. 1MB. £3.50.
DV43 - LazerZone. 1MB. £3.50.
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AMU14 - Battle Mech a strategy war game between robots.
PD90 - Tennis! and excellent implementation of the sport. 1MB.
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PD233 - Holy Grail adventure. 1MB.
PD234 - Golden Fleece adventure.

LICENSEWARE

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DV60 - 1MB. Techno Snail all the baby snails have been stolen and you have to rescue them. £3.50.
DV61 - 1MB. The Final Chapter. A brilliant 3D game! £3.50.
DV62 - Revolution a game 2 to 4 players. £3.50.
DV63 - 1MB. Wilberts Winter Wonderland. More from the Magic Forest series. £3.50.
DV64 - Rescue II. A 3D game. £3.50.
DV66 - Hotel Manager a good board game full of colourful graphics. £3.50.
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DV8 - Work and Play (requires 1MB RAM). 3 excellent programs Funtimes Table, Let's Go Shopping for maths and Click Clock tell the time. £3.50.
DV10 - Word Factory which is a games type enviroment for spelling. £3.50.
DV37 - Rocket Maths 4 part maths game - Take Off, Star Map, Rock Storm & Landing. Choose Easy, Medium or Hard with Times Tbale, Take Away, Add up & Divide 1MB £3.50.
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SCHWARTZ ANIMATIONS.
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FF414 - Batman, LateNightTerminal.
FF417 - Coyote 2. The Road Test.
FF418 - Arny the Squirrel. 1MB.
FF423 - Pogo to Mam'a'selle. 1MB.
FF450 - ArnyVsWalker. 1MB.
FF490 - ANTI LEMMING. 2MB.
FF504 - SHUTTLE COCK. 1MB.
FF505 - THE DATING GAME. 3MB.
PLUS OTHERS
PD630 - It Read Top Secret animation cartoon story.
PD651 - Tree Frog, Window Man, Walking Man and Hammer.
SMAUG 213 - Shoope a silver woman with a teapot head and a hoola hoop.
SMAUG 90 - Harrier Jump Jet.
SMAUG 104 - Exploration - a globe with the Amiga logo on it spinning around then a missile is launched and this turns into a satellite! 1MB RAM.
SMAUG 132 - TelStar One A long animation of 2 space ships very good quality. 1MB RAM.
SMAUG 135 - Mars Flight a single seater space fighter flying over scenes from a habitated planet supposedley Mars. Requires 1MB.
SMAUG 136 - Twilight a car with headlamps on driving along a road in a landscape. 1MB.
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PD2 - Walker II. 1Mb RAM.
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PD74 - Star Trek space craft flying around in a circle.
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PD427 - Star Trek Leave Space Office.
PD83 - Space Ace.
AMU42 - The Juggler.
FF200 - 'NotBoingAgain'. 1Mb RAM.
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PD59 - Ameteur Radio Disk.
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FF342 - IE the icon editor that allows you to create icons upto 640 x 200!
PD279 - ESA Utility Disk 1. This disk contains 3 dozen excellent utilities!
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FF568 - CalorieBase caloric and fat count on most foods useful for recipes and daily total intake.
PD300 - The Master Virus Killer V2.1 recognises 124 viri!
PD641 - SuperKillers anti virus disk recognises & destroys 146 viri!
TB31 - ShoWiz show any picture with or with out your own controling script.
PD93 - ARP V1.3 the Amiga DOS Replacement Project.
FF228 - JazzBench v0.8 is a multitasking WorkBench replacement.
FF558 - DisDF stops drive clicking when no disk in drive.
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AMIGA COMPUTING

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The power and

After a long drive into the deep south our intrepid reporter (yours truly) finally arrived at the door of Power Computing, the Bedford-based nerve centre of Tony Ianiri's European empire.

With outlets in France, Italy, America and soon Germany, Bedford may seem an unlikely choice for a centre of operations.





Nevertheless, it's where Italian ex-patriot Toni and wife Julia – the real boss – have made their home. Good news for the locals, and even better news for our balance of payments.

After a varied and well travelled career in the motor industry, Tony finally settled in this green and pleasant land way back in 1984, braking into the computer industry almost accidentally. A friend back in the old country offered the chance to handle the UK distribution of a revolutionary multiply interface for the Sinclair QL, that prototype for the ill-fated C5.

This chance encounter turned our engineer into an entrepreneur overnight, with over 20,000 units hitting the streets within the first year. From these humble beginnings, a turnover of five million last year and a projected seven to eight million next year has made Power Computing one of the premier suppliers of Amiga hardware and software, with a registered user base of over 50,000 customers.

After parking the car and sharpening a pencil I was guided to the man's inner sanctum. At the far end of an impressive polished conference table sat the diminutive but impressively portly figure of "the boss". From the tip of his toes to the imported suit, Tony looks every inch the classic Hollywood Italian, a mixture of Danny Devito and Don Colioni, a man who'd look equally at home with a shooter, as opposed to the phone which occasionally appeared welded to his hand.

After a brief gesture to take a seat, Tony heads back to the telephonic fray with the poor unfortunate on the other end, a man doing his best to stand up against a barrage of high-speed Italian occasionally interspersed with snippets of English.

After a few moments the battle is over and he turns his attention to yours truly, muttering perhaps his favourite phrase, "Bunch of crooks".

Once recognised as friend rather than foe, a welcoming smile spreads across his face, immediately followed by a handshake and an order for two Espressos. After a few more pleasantries it is down to the serious stuff with a few thoughts on the Amiga scene from the man who knows the business better than anyone.

Tony mentioned in the question-and-answer session (see interview box) that the market was flooded with cheap replicas of his and other developers' products. How come they were being undercut? After all, if their competitors can do it, why can't they? After a quick lesson in what's best described as everyday Italian, Tony calmed down to explain that a number of factors make the difference.

"First there's no development cost if you blatantly rip off others. Secondly, little or no product testing ever takes place. Thirdly, there's no tech support. But perhaps most worrying of all is that many manufacturers have taken to using recycled components!" – something which he and other big names would never do.

Recycled

The recycling point instantly raised another question. If indeed other suppliers are dealing in second-hand kit, how could the average punter tell the good from the bad, and if they did, what should they do about it?

"Well, first and foremost, if you pay for a new product and it obviously isn't, send it back and demand a refund, and if you're not happy with the results get straight on to the trading standards.

"Actually spotting the offending hardware isn't that simple but there are a few tell-tale points which give the game away. Often second-hand chips are scratched or show obvious signs of wear, such as faded or worn serial numbers and stamp markings.

"Secondly, if the chips have been surface mounted or simply cut from their sockets, the legs will be extremely short in comparison to new components.

"At the moment, this recycling is mainly restricted to RAM expansions and other mass production items, so spotting the chips shouldn't be that tricky. If you

Hands on – how a product is created

Chris Allen, the head of Power's in-house development team, is the man responsible for many of the company's hardware projects. I asked him how Power went about creating a product, and what was the key to a successful release?

"The first job, and by far the most difficult, is picking the project itself. The Amiga is the ideal platform for gadgets and add-ons, but you must identify a need and produce the right product to fill that particular gap in the market.

"Simply revamping old ideas isn't enough to be successful – it must be an original idea or at least a radical approach to an existing problem.

"Once the project is selected, the next job is to plan an approach to the particular problem. Once a solution appears it's time to head for my machine and its ever-present CAD package, closely followed by the programming of the chips themselves.

"In the bad old days, sometimes hundreds of individual chips were needed to produce a single product. Now I employ Pals and Gals or logic chips if you prefer, which make the design process much faster.

"A single Gal can take the place of up to 20 standard chips but the real beauty comes when we start de-bugging a product. Because the chips are reprogrammable, finding and rectifying a fault doesn't mean that the whole thing need be re-burnt.

"Now we just remove the offending bit of silicon and reprogram it. When all's well, a PCB is finalised and the prototype produced. Thanks to the new design methods a six month product can now be turned around in as little as a month."



The use of programmable and, more to the point, readable chips does pose the nagging problem of piracy. I put this to Chris and he soon put my mind a rest by adding that once the programming process was complete, a special security fuse within the chips can be blown making it virtually impossible to read the contents.







the glory

Paul Austin takes a trip to little Italy and talks to Tony Ianiri, the man behind one of the biggest names in the business

have any doubts, enquire with the supplier immediately. And as I said, if you're still not satisfied send it back. You paid for a new product and that's what you should get.

I had to mention that Power weren't adverse to the odd bit of product re-badging, just like everyone else. In reply, Tony admitted that products such as the new scanner were indeed third-party but in



this case it was Power's own software, developed in-house, that makes it special.

I asked Tony what he thought Commodore could do to improve the Amiga's after-sales service. This brought on a flood of suggestions, the most interesting of which was the installation of dedicated Commodore points throughout the UK, a system which already exists in Europe but as yet has failed to appear over here. These regional satellites would handle not only the sale but any necessary technical support for the machine.

Then when problems arose, faulty kit could be taken directly to the local Compoint and replaced instantly as opposed to the often painfully slow process of dealing with FMG.

Another point mentioned was Commodore's insistence on faulty kit being accompanied by its supplied packaging. Why a punter or supplier can't send products in any suitable packaging proved to be a sore point with uncle Tony.

The final complaint was Commodore's 32-day replacement policy. At present, if your machine develops a hiccup after the 32nd day of ownership, Commodore's policy insists that the offending article be sent to FMG, again provoking the usual FMG delay.

The Italian inquisition

Has the Amiga peaked, or is there still room for expansion?
No, no, not even close, the machine is going from strength to strength. With approaching 200,000 Amigas sold over the Christmas period, the market is just as strong as ever, and with little or no competition the sky's the limit.

What do you think is the key to successful business within the Amiga market?
Above all else, you must lead rather than follow in the wake of others. This is what Power do better than any other company in the business. We don't wait for things to happen, we make them happen! The Amiga is the perfect platform for gadgets and new applications. If you can isolate a need and cater for it, the possibilities are endless.

Do you think there's any opposition for the Amiga on the horizon?
At the moment none at all. The only real opposition is the ST and to be honest that's a dying market. Having said that, the STE is a good machine but vastly overpriced. The same applies to the TT.

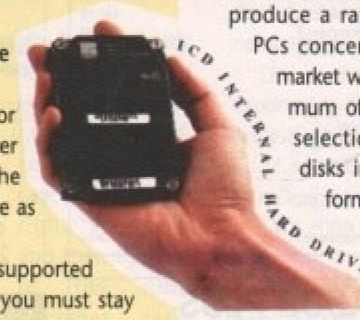
If Atari would consider matching Commodore's pricing policy they could make a dint in the market, but it's highly unlikely they will. Even so, we'll continue to support the ST, after all there's a lot of machines out there.

Do you think the console explosion is going to damage the machine?
No chance, the console thing is just a passing phase strictly aimed at the kids. If anyone seriously considers consoles as opposition to the Amiga, they probably won't be old enough to afford one, or use it if they could. Considering the average console retails around £60, any Amiga owner who wants one is unlikely to have to sell their machine to get it.

What, if anything, do you think makes Power stand out from the crowd?
Unique products, original and novel ideas with full tech support for the whole range. Lots of other companies churn out product after product simply copying the ideas of others without a care for the user. If we cannot support a product we don't carry it, it's as simple as that.

In the short term, simply flooding the market with cheap, unsupported products, will make profits, but if you want to remain in business you must stay ahead of the game and provide a quality service regardless of cost.

Equally as important as our marketing policy is Power's in-house development. Unlike many companies we develop a wide range of our own products rather than simply becoming the middle man for the big developers. True, we do carry third-party equipment, but a healthy percentage is all ours.



The Future

Before I left for the long trek north, I asked Tony what Power has planned for the immediate future. This brought some interesting revelations, one of which could revolutionise the addition of a hard disk to a standard machine. Until more details appear it's perhaps best to simply whet your appetite and leave it at that. Nevertheless keep a close eye on Power if you're in the market for hard drive!

In the coming year Tony intends to concentrate solely on hardware, dropping all software whilst increasing the design and release of hardware especially within the music field.

Music is the number one priority in '92 and Power are busy planning a whole range musical add-ons which should start to appear within the next few months.

In general, the Amiga is still their premier market but there are plans to produce a range of Power 25/33 MHz PCs concentrating solely in the 486 market with S-VGA monitors, a minimum of four meg on board plus a selection of 40/60/100Mb hard disks in both tower and desktop formats.

I'd like to thank Power Computing and especially Tony Ianiri for the frank conversion, honest opinions and classic Italian hospitality.

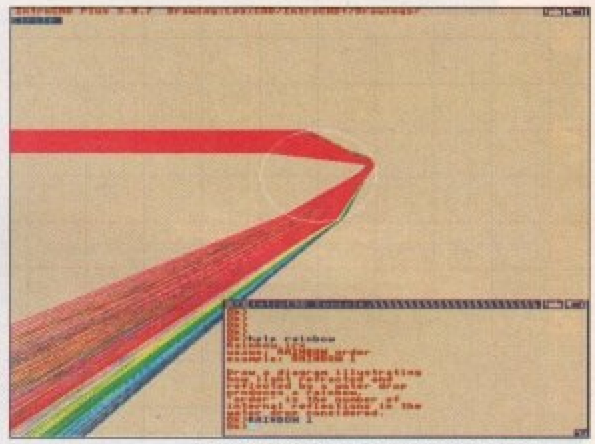
All that's left is to wish both Tony and his company good luck for the coming year, though I doubt they'll need it. AC



UltraDesign's CADVerter program converts drawings to and from several file formats

Hot on the heels of last month's CAD supertest, Stewart C Russell presents another triple bill of packages

Progressive designs



IntroCAD Plus has a command line ARexx interface, permitting complex parametric operations to be automated

One of the most prominent publishers in the CAD software scene are Progressive Peripherals & Software of Denver, Colorado. Their products arrived just a little too late for our CAD supertest, run over the last two months, so for the sake of completeness, this article will look at Progressive's three packages.

The packages were tested against the others reviewed in previous months – you can be assured that the best CAD package will come out in the end.

Aptly named, IntroCAD is not designed to be used for demanding applications. It is designed to be very easy to use, while still being capable of producing superb quality output.

IntroCAD is extremely basic. Hence IntroCAD Plus was created to address some of the limitations of the original program, whilst sacrificing only a very little of ease of use. Among other things, it adds ARexx support, multiple fonts, and user defined fonts.

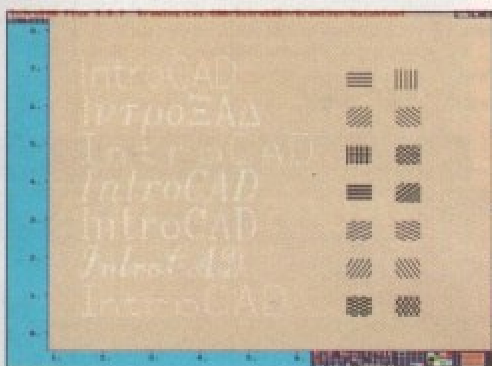
Informative

UltraDesign is not related to IntroCAD in any way. It tries to offer absolutely everything anyone could ever wish for in a 2D draughting system. It has a particularly consistent user interface, making heavy use of gadgets and requesters, rather than dated (but quick) command lines.

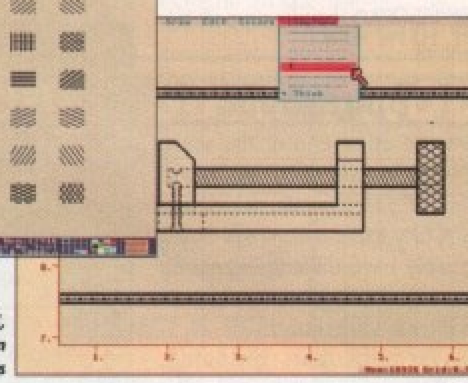
IntroCAD has a semi-skimmed handbook – it has all the good things of normal manuals, but without the harmful excess. In 45 small pages it manages to fit a small, informal tutorial, a description of all the features in the program, and an index. It's written in a manageable, informative style – a definite plus point for a system which might be used by very inexperienced users.

Additional documentation is supplied on the program disk. This isn't as much of a bind as it sounds, for only the technical stuff about file formats and printer driver creation is stuck there. Most users won't ever need this information, as a reasonable range of drivers is supplied.

IntroCAD Plus actually has a better manual for beginners than IntroCAD, even though it is a more complex program! It describes how the mouse is used, menu items and disk installation for every conceivable Amiga setup.



The range of fonts and hatch patterns available in IntroCAD Plus rivals many more expensive programs



IntroCAD works best with small, illustrative drawings rather than full technical layouts

Like IntroCAD, IntroCAD Plus only manages a very quick sketch tour of the program, rather than a proper "let's draw an object" tutorial. Maybe the author thinks the program is simple enough not to require a full tutorial – it doesn't support complex objects such as dimensions, splines or fillets, after all.

UltraDesign is a big program, and has manuals to match. Three, to be precise – the main manual, which is just over three hundred pages; the tutorial manual (just over twice the size of the whole IntroCAD manual), plus the UltraDesign 1.1 update, which covers all the features in detail.



There are no plotting routines built-in to UltraDesign – PasteUp, a very user-friendly program, handles that

The tutorial is huge. Most of it describes the drawing of a modem case, but a small section at the end deals with building up a parts library. Although very clearly written, it suffers from being very verbose – I lost interest half way through.

The main manual suffers from a ghastly index. Items are listed under headings, but none of these headings are cross-referenced. It's a case of finding the right synonym, and then the rest of the hunt becomes easy. Unfortunately, Roget's doesn't contain any words to do with CAD. Even though the three programs come from two different development teams, they all use the same basic mouse convention, the "Left button – OK, Right button – Cancel" regime made popular by AutoCAD. It's fine on a machine where the right button hasn't got any other use, but on the Amiga you sometimes wonder whether a menu is going to appear or the current action will be cancelled.

UltraDesign also implements crosshairs, possibly the most valuable alignment tool for quick drawing there is. They do shimmer a lot on an interlace screen, but the convenience outweighs the headaches.

Toolbox menu

IntroCAD does everything from simple Intuition menus to submenus. Nothing too complex here, but since the program runs on an interlaced high resolution 16-colour screen, there is a noticeable delay in rendering the menus.

IntroCAD Plus follows the same pattern as its smaller sibling, but has gained a very handy toolbox menu, which allows the pen colour, hatch pattern and layer to be changed. This menu is small enough to keep on the screen all the time.

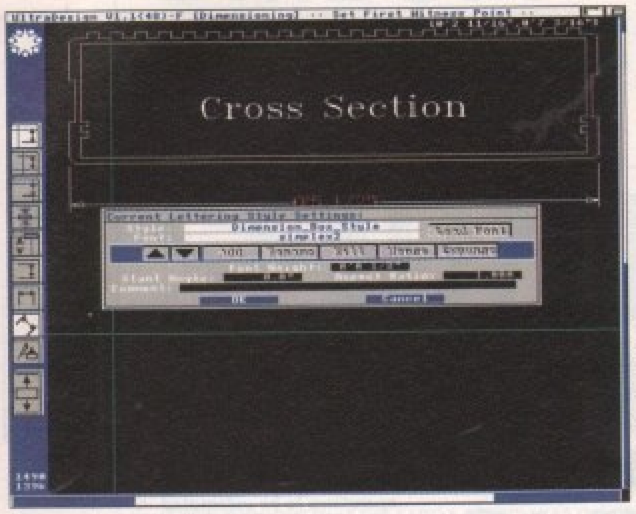
There are also icon menus down the left-hand side of the screen. Unlike DynaCADD, which changes its menus as the command context changes, these icons depend on which drawing mode the program is in – one of line, ellipse, text, dimension or hatch.

Now the flipside. I've said it many times, but screen update speed makes or breaks a program. None of these programs are particularly slow in absolute terms, but when compared to X-CAD, they grind.

One of the IntroCAD example files was exported to X-CAD 2000 (last time's best-on-test) and UltraDesign. IntroCAD redrew in 21 seconds, IntroCAD Plus in 21, and UltraDesign in a snore-inducing 44 seconds. X-CAD 2000 did it in just over nine seconds.

The reason why other CAD packages aren't as fast as X-CAD evades me. Life is too short to hang around for mere software!

You're not going to believe this – I didn't – but neither flavour of IntroCAD can ➤



UltraDesign is shown here in Dimensioning mode, where you can draw any entity you like as long as it's a dimension

dimension objects. Correct me if I'm wide of the mark here, but isn't the whole idea behind CAD to produce nice drawings with sizes marked on them?

UltraDesign has pretty adequate dimension handling. It cannot handle tolerances in a dimension, but this is not a major issue if the drawing is subject to an overall tolerance. Still, it does mean that drawing components with critical fits is difficult.

IntroCAD drives printers directly, without recourse to Preferences. Instructions are given on how to create a printer parameter file if your printer isn't already supported – IntroCAD comes with a few drivers, Plus comes with a whole lot more. A similar technique is used to drive plotters – most normal devices are supported, with instructions on how to drive other devices.

A separate paste-up program (called, not surprisingly, PasteUp) handles all the output from UltraDesign. Large drawings can be output from Preferences to dot matrix printers on multiple sheets, and taped together to make the final drawing. Scaling and rotation of the drawing is done with the mouse, and the results can be previewed in very low resolution onscreen.

PasteUp plotter support is not as good as IntroCAD. Roland, Houston or HP-compatible plotter drivers are supplied with the package. These cannot be altered, as they are executable files.

PasteUp does have the useful plus point of supporting PostScript output to laser printers, or Encapsulated PostScript Format (EPSF) for inclusion in DTP packages. The PostScript output looks good – the EPSF output is not properly scaled unless the drawing reaches to the very edges of the page.

IntroCAD Plus has very simple layer handling – 16 layers, all accessible from the menu or toolbox, with on/off controls. No user of IntroCAD would ever need more layers, and even users of more advanced systems seldom do. The basic IntroCAD doesn't support layers at all.

Outrageous

At the other end of the scale, UltraDesign supports an outrageous 65,535 separate named layers. A fully expanded Amiga would probably have difficulty handling these layers if they were empty, so this is quite unnecessary.

As regards part grouping, IntroCAD supports it by necessity. Every item in IntroCAD (and Plus) is built up from line segments, and more complex items (such as arcs and text) are simply groups of lines. Objects can be grouped further, and stored or recalled as parts.

Again, UltraDesign attempts to the best. Not only is grouping supported, but groups are arranged in full hierarchy. Parts can be called in from libraries, and reports can be built up from part attribute lists. Pretty neat stuff – and all called up from requesters, too. X-CAD could learn something from this.

IntroCAD comes with a couple of interesting utilities for making graphs. Multiplot makes 2D plots of multiple data sets, while 3DPlot makes hidden-line contour maps of 3D data. Plots from these can be imported into IntroCAD, or plotted directly to an HP-compatible device.

Both of the above utilities are public domain. Indeed, Multiplot has been considerably developed by Dr Alan Baxter of Harvard Medical School, and has become an extremely powerful and Intuitionised graph tool.

IntroCAD Plus also comes with a version of Multiplot. This particular revision can use ARexx to draw graphs directly onto the IntroCAD Plus screen, saving the bother of importing a data file into the program. AC

The verdict

All the programs have their strong points. IntroCAD is simple, IntroCAD Plus can do clever things with ARexx, and UltraDesign looks nice.

Something is lacking from all of them, though. I couldn't live without spline curves (missing from all three) or without dimensioning (IntroCADs). Sure, the addition of ARexx and other niceties add interest, but the absent features (and very absent speed) couldn't persuade me to recommend the programs. They are just ever so slightly expensive, too.

X-CAD still rules the roost. It may be slightly tricky to learn, but it's faster and better than any of the Progressive offerings.

Special features chart

	UltraDesign	IntroCAD Plus	IntroCAD
Version tested	1.1(48)-F	3.0.7	2.0
Type	2D	2D	2D
System requirements	1Mb RAM, 2 FD	1Mb RAM, 2 FD	1Mb RAM, 2 FD
Price	£300	£99.95	£59.95
Command input			
Command line	Yes	Yes	No
Icon menus	Yes	No	No
Expression calculator	No	No	No
Crosshairs	Yes	No	No
Tablet support	No	No	No
Journal file	Yes, plus ARexx	Yes, plus ARexx	No
Text			
Multiple fonts	Yes	Yes	No
Font editor	No	Yes	No
Dimensioning			
Default system	Imperial	None	None
Dimension alignment	Automatic	n/a	n/a
Tolerance input	None	n/a	n/a
3D			
Multiple view	n/a	n/a	n/a
3D surface	n/a	n/a	n/a
Rendering	n/a	n/a	n/a
Ray tracer output	n/a	n/a	n/a
Import/export			
DXF	Yes	No	No
Aegis Draw	Yes	Export only	Export only
HPGL import	Yes	No	No
Output			
Plotter	Roland, Houston, HP	Any	Any
Printer	via Preferences	Any	Any
Screendump	No	Yes	Yes
IFF	Yes	Yes	Yes
PostScript	Yes, plus EPSF	No	No
Miscellaneous			
Max layers	65,535	16	None
Object attributes	Yes	No	No
Co-processor support	Optional	Supplied	No
Bitmap import	No	No	No
Online help	No	via ARexx	No
Screen mode	Hi-res only	Med-res, hi-res	Hi-res only
Multiple drawings	No	No	No

Products, publishers and distributors

IntroCAD	£59.95
IntroCAD Plus	£99.95
UltraDesign	£300

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Progressive Peripherals & Software
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Denver, Colorado 80204-5020

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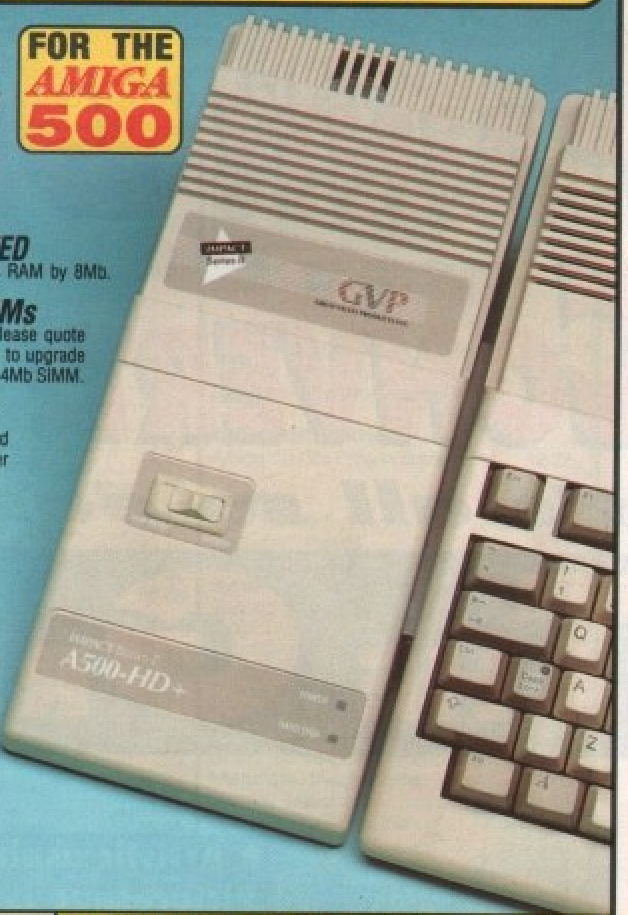
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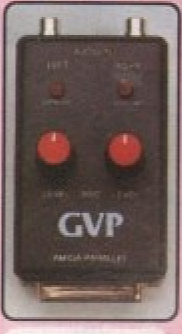
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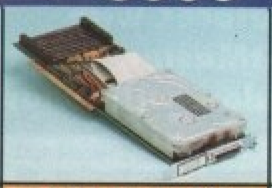


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- Devpac 3 Macro Assembler New 54.99
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- Hisoft Pascal Compiler New 84.60
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- QuickWrite 39.95
- Scribble Platinum 42.77
- TransWrite 32.90
- WordPerfect 189.88
- Wordworth 87.89

* Please check the availability of items marked with an asterisk.

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BOOKS
- Get The Most from Amiga 1991 5.95
- Get The Most 1992 8.95
- GW-BASIC For Beginners (PC) 14.95

DISK FOR BOOK
- Amiga 3D Gfx Prog in Basic 12.22

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- Deluxe Video 1.2: Elec Arts 24.91
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- Penpal Wordprocessor 49.82
- Personal Accounts Plus 19.74
- Photon Paint 19.74
- Pixmate: Progressive 29.61
- Professional Page 1.3 DTP 99.64
- Spritz Paint: Best 24.44
- Studio Magic Sound Workshop 29.61
- Textcraft Wordprocessor 19.74
- The Works Platinum (Bundle) 39.95
- Video Studio 89.77
- VideoScape 3D: Aegis 79.43
- VideoScape Disk: Microbot 19.74

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Words and pictures

Stevie Kennedy goes back to school with the Protext tutorial video

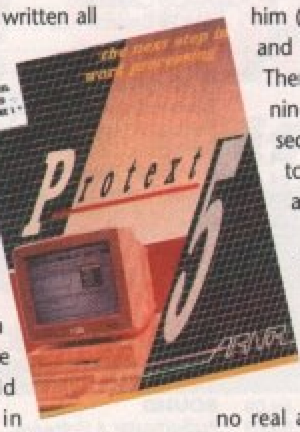
Of all the wordprocessor packages available for the Amiga, Protext is probably the one which would benefit most from a bit of extra beginner's help. Its complex command interface and macro functions are well documented in the manual, but for the average compu-phobic user they often appear baffling and even hostile to the uninitiated.

The tutorial video is a Premier Video production from Arnor themselves, so one would expect it to home in on the sort of problems most users encounter with the program's more esoteric functions. After all, Arnor have been around long enough to have amassed a mountain of feedback from their customers.

Disappointed

I was disappointed, therefore, to find the first third of the 90-minute tape dedicated to basic functions, such as highlighting blocks of text and moving them around documents. These operations must, I suppose, confuse some users at first, but there are surely very few who give up at this stage, especially when you consider the generally high quality of the manual supplied with Protext.

As the video progresses, things improve considerably, and many of the program's more problematic features are covered in convincing fashion. Individual sections, which are preceded by a spinning title with DPaint III written all over it, cover setting up templates, using columns, setting up standard sentences and mailing lists, generating labels, and using the incremental variables and calculation modes.



My only gripe with the latter part of the tape is that its topics could have been covered in more depth if a certain level of user knowledge had been assumed to begin with. Ten full minutes are wasted on explaining printer effects such as underline and bold, when the time would have been much better spent examining the much more complex – and more useful – command mode and exec files.

That said, the video is easy to watch, the tutor has a fairly engaging way about him (despite the odd bland remark), and recording quality is reasonable. There's a bit of music at the beginning and little snippets play as each section is introduced, which helps to break up the lengthy hour and a half session.

The lessons progress in a logical fashion from start to finish and the tutor never lapses into technoblarb, so beginners should feel at home.

On the other hand there is no real attempt to refer to the Protext manual, and the tutor doesn't encourage the viewer to switch off and practice a particular lesson. There's no overview of what the beginner should have learned from each section,either.

In other words, there is little interaction between "pupil" and tutor, and unless you take the decision to switch off at various points yourself, the tutorial becomes one long sit-back-and-watch session. I don't want to end on a negative note.

The Protext tutorial video is a lot better than many I've seen, and would make a good investment for anyone determined to master the package's most difficult aspects.

Complex

It attacks complex features in a simple and easy-to-follow fashion and, apart from not giving enough time to the really tricky bits, has a well balanced approach to its subject.

With a price tag of £24.95, however, I can't help thinking it will appeal more to the small business and training markets more than the dedicated home user, who will probably stick with what is a more than adequate manual in the first place. Perhaps volume 2 will be an improvement? AC

The Protext tutorial video is a product of Premier Video
Phone: 061-790 1662
Price: £24.95
Available now

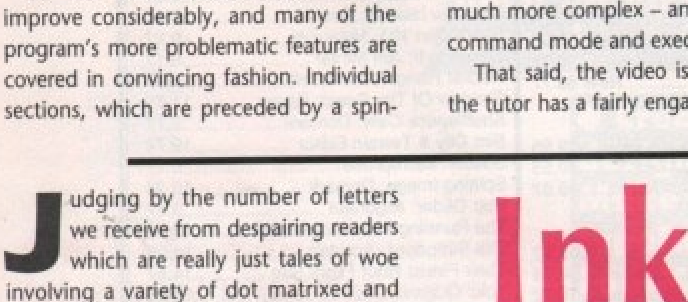
Inky fingers

A program that'll improve your printer's output? Stevie Kennedy takes a look

Judging by the number of letters we receive from despairing readers which are really just tales of woe involving a variety of dot matrixed and bubble-jetted fiends, you'd think the average printer's mission in life was to cause as much misery as possible. In particular, the swarm of users who come to grief over graphic printing reaches holocaust-like proportions some months.

Frustrated

TURBOprint Professional (TPP) is aimed at exactly these poor unfortunates and seeks to form a user friendly bridge between the frustrated human and the smugly recalcitrant heap of concentrated obstinacy more commonly referred to in rather more unrepeatable terms, which we'll call a printer for now. To an extent, it succeeds, but whether it is worth its £49.99 asking price is something I've a few doubts about. When run, the program sits in the background and is reset-proof (causing no end of alarm to the army of virus-checkers guarding my system). The user can ignore it completely from then on as it intercepts all normal Workbench printer requests and uses its own printer drivers and preferences settings rather than the usual sorry Workbench lot. To configure TPP, there is an all-encompassing TURBOprint preferences program which, as it opens on a Workbench screen and has standard gadgets, should be familiar to anyone who's used the prefs program supplied with their machine. TPP prefs is split into four sections, covering printer driver selection and dithering modes, general prefs settings, colour control, and a snapshot screen saver facility.



There are plenty of drivers to choose from and a good selection of dither options

For some unknown reason, the prefs default to using Workbench prefs and printer driver settings, so you'll have to run the TPP prefs program to switch over to TPP for your output. When you do, you'll have a generous supply of dithering options, driver selections for most popular printers, and comprehensive colour control.

With a lot of tweaking and experimenting, it is possible to set TPP to achieve quite impressive results with 24-pin printers and 24-pin colour models, but the improvement in performance isn't nearly as noticeable on a 9-pin .

There are drivers for laser printers, the Canon BJ-130, and HP Deskjet as well as dot matrix printers, and they all seem to work well, though only non-PostScript laser printers will benefit from TPP as PostScript achieves far better output than the program could ever aspire to.

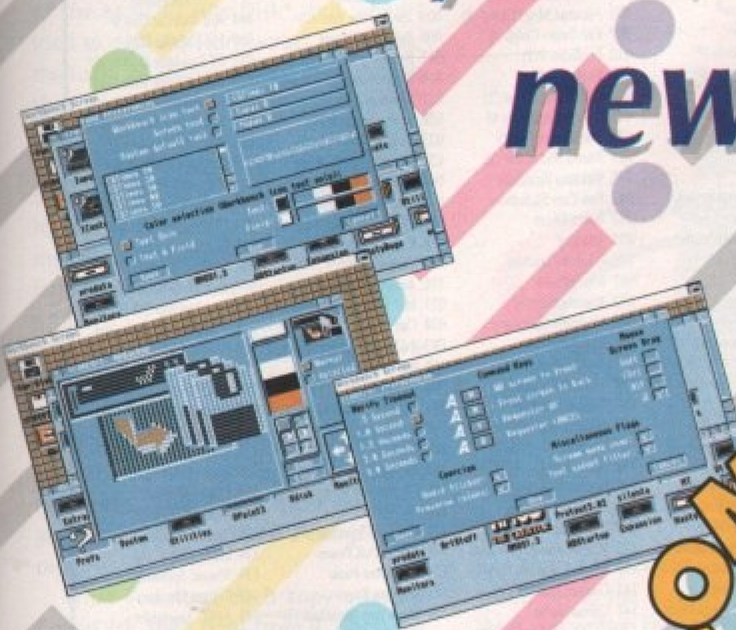
Popular

For users of 24-pin dot matrix printers and the increasingly popular BJ-130, TPP is probably a good buy as long as you are besotted with graphics or need better quality output than the Workbench drivers will supply.

On the whole, though, the only part of the package I will probably use for a while is the excellent screen saver, and for 9-pin users there's little point in shelling out for this program when you could sell your old printer and put the £50 towards a decent 24-pin. AC

TURBOprint Professional is a product of IrseeSoft
Distributor: HB Marketing
Phone: 0753 686000
Price: £49.95
Available now

Give your Amiga a whole new lease of life!







Win one of ten Phoenix ROM sharers and Kickstart 1.3/2.04 ROM chips in our system-swapping spectacular

Owners of older Amigas can't wait to get their hands on the latest version of Workbench, and A500 Plus owners would kill to make their machines compatible with all existing games software. With *Amiga Computing's* help, you could do both at the flick of a switch!

The Phoenix ROM sharer, from First Choice Computers, fits inside your Amiga and accepts two Kickstart chips – your existing chip and the 2.04 or 1.3 chip you need to give your machine a dual identity.

When fitted, a neat little external switch is used to flick from one operating system to another. If a game doesn't work with your A500 Plus, just turn off the machine, flick the switch, and turn the Amiga back on again for instant 100 per cent compatibility. If you're sick of playing games, turn off the machine again, flick the switch, and boot up for Kickstart 2.04's excellent new features. Nothing could be simpler!

Could you ever forgive yourself for spending £65 when you could win a sharer board and ROM chip for the price of a stamp? Get that Biro out and answer the simple questions below!

Make sure you specify whether you have an old Amiga or one of the new A500 Plus machines. That way we'll know what sort of Kickstart chip to send you, and as there are five of each on offer, you'll never have a better chance to catch up with the Joneses!

The first five correct entries in each category drawn from the bag will win the goodies! Closing date: April 2, 1992.



The questions

1. *What does Kickstart stand for?*

a The act of starting a motorbike in the morning
b The Amiga's built-in operating system
c A special method used by Albanian sprint swimmers

2. *What is the latest version of Kickstart?*

a 2.04
b 3.00
c The one with the little orange blob on the top

3. *How many plates of jelly and ice cream can you fit on top of a Kickstart chip?*

a 2.56
b None
c Four, as long as you use small plates and don't wobble the jelly too much

of finding out what was wrong. I discov-

you have two colours, say red and onscreen to give the perceived colour ell, I calculated this equation:

colours on pallette
int
no.of perceived colours

ose half the resolution vertically and at these figures for the number of n interlace (640 x 512) gives you 320 x 256, and a Harlequin card (910 0 billion (approximately) at a resolu-

Paul Stevenson, Birmingham

owners. There will be a new version of WorkStation, called WorkStation 2, available shortly, which will be 100 per cent compatible with the A500 Plus, and will include many new or revamped programs, including the long-awaited SID v2.00.

SID leaves a process window open on the A500 Plus because Workbench 2 now attaches a process window – in this case a sort of read-only Shell window – to many programs which previously opened without one. As you've noticed, this window can be shrunk to a fairly small box, but cannot be dispensed with until SID is closed down.

You should look on SID's process window ... so it will display

Please note that the prizes don't include Workbench 2.04, just Kickstart 2.04. You'll still have all the new Workbench menus, the leave out option and so on, but for full Workbench 2.04 features, you'll have to buy the upgrade from Commodore. However, this will cost at least £40 less because you'll already have the Kickstart chip!

mugly recalcitrant heap of concentrated bstinacy more commonly referred to in ather more unrepeatable terms, which ve'll call a printer for now. To an extent, army of virus-checkers guarding my system). The user can ignore it completely from then on as it intercepts all normal Workbench printer requests and uses its



There are plenty of drivers to choose from and

Amiga Computing
ACAS
Advice Service

Printer out of puff? Computer cracking up? We're here to help!

Write to ACAS, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP

Save your saes please – we can't reply personally

MED medley

The two features I like the most about your CoverDisk are Tune of the Month and Game of the Month. I enjoy the tunes so much I decided to create a Tune of the Month "Hits Disk", but when I tried to drag the icons across to my disk, the tunes no longer worked even though they appear to have copied properly. What have I done wrong?

Would it be possible to save the Game of the Month to a new disk each month to save all that disk swapping when I play my favourite games? I'm new to this CLI lark, so please make the answer idiot-proof.

Terry Edward, Blairgowrie

Most of our tunes are written in MED and require the MedPlayer utility to be present in the disk's C: directory. However, you don't have to mess about with CLI to create a compilation disk.

What you must do is copy a recent CoverDisk, then boot from it, open the main disk window, and delete all the directories you can see. To do this, click once on the icon, then select Discard from the Workbench pull-down menu (A500 Plus owners can use Delete on the Icons menu).

Once all the directories have gone, you should have an auto-booting disk, complete with C: directory and MedPlayer, and about 600k free space, which is enough to hold four or five tunes of the month.

The tunes should now work fine just by double clicking on their icons. Pleasant listening.

Beginner's book

I am having trouble finding books that explain machine code at the level of the beginner. A lot of books are either so crammed that I drown in technicalities, or so simplistic that the author's intuitive leap in logic leaves me slack jawed!

The best book I have found isn't even for 68000 processors, but for the IBM PC! The book I do have for the Amiga is the one from the Abacus series, yet to me it reads like it was written by a super-expert who forgets that the rest of us aren't as gifted. Can you recommend anything that would help?

Vaughan Malkin, Dunedin, New Zealand

From what you say, it sounds like you have Abacus's *Amiga Machine Language*. If that is true, then you already have probably the most approachable machine code guide I've seen. Admittedly, though aimed at the beginner, the book does jump in with both feet in places, but the subject is so huge and complex there's no avoiding a bit of head-scratching.

You could try Jake Commander's *Amiga Assembly Language Programming*, available from Computer Manuals on (+44) 21 706 6000. As phoning from New Zealand is rather pricey, the company can be reached at 50 James Road, Tyseley, BIRMINGHAM B11 2BA. The reference number for the above book is 4642, but I'd advise you to stick with the Abacus book and keep hammering away at it. With machine code, this is usually the only way to learn the language.

WorkStation worry

Please can you help? I've recently sold my A500 in favour of an A500 Plus, and have checked my software collection for possible incompatibility problems. To my horror, my games mostly worked OK, but my favourite utility disk, WorkStation, did not!

The computer started to read the startup-sequence and all appeared fine until just after the SETCLOCK OPT LOAD line, when a crash took place. I loaded an old version of SID and set about the task of finding out what was wrong. I discovered that the line OPENLOOK >NIL: was causing the problem, deleted it, and my WorkStation disk now works fine.

One last gripe: when I open SID on my A500 Plus, it leaves a huge SID PROCESS WINDOW onscreen when I shrink SID down. Can I do anything about this or close it down?

R J Rouse, Colchester

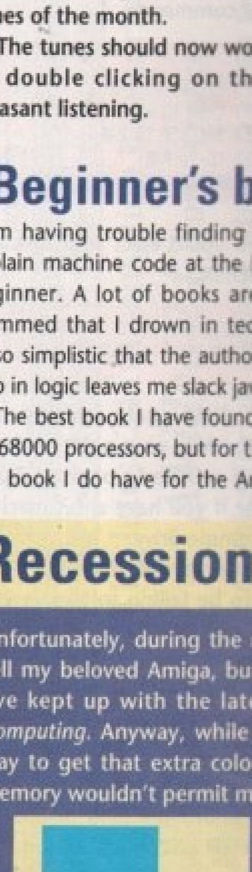
Don't worry about WorkStation. When the original disk was compiled, Workbench 2.04 was a dream only A3000 owners could realise, and the disk was aimed at Workbench 1.3 A500 owners. There will be a new version of WorkStation, called WorkStation 2, available shortly, which will be 100 per cent compatible with the A500 Plus, and will include many new or revamped programs, including the long-awaited SID v2.00.

SID leaves a process window open on the A500 Plus because Workbench 2 now attaches a process window – in this case a sort of read-only Shell window – to many programs which previously opened without one. As you've noticed, this window can be shrunk to a fairly small box, but cannot be dispensed with until SID is closed down.

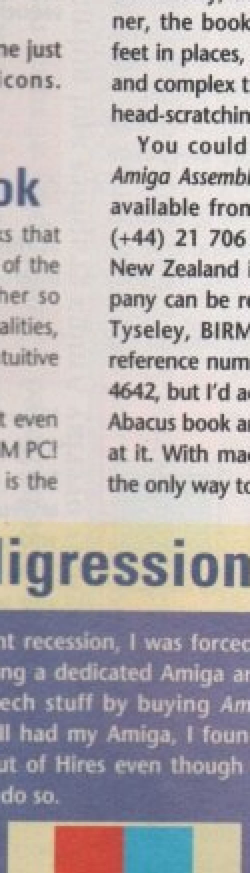
You should look on SID's process window as a bonus, as it will display any error messages generated by pro- ➤

Recession digression

Unfortunately, during the recent recession, I was forced to sell my beloved Amiga, but being a dedicated Amiga artist I've kept up with the latest tech stuff by buying *Amiga Computing*. Anyway, while I still had my Amiga, I found a way to get that extra colour out of Hires even though my memory wouldn't permit me to do so.



screen



zoom

Basically, it's this – if you have two colours, say red and blue, you dither them onscreen to give the perceived colour of purple. So what? Well, I calculated this equation:

$$\frac{\theta^2}{1.6} = x$$

θ = No. of colours on pallette
1.6 = constant
x = Actual no.of perceived colours

OK, fair enough you lose half the resolution vertically and horizontally, but look at these figures for the number of colours! HAM mode in interlace (640 x 512) gives you 10,485,760 colours at 320 x 256, and a Harlequin card (910 x 576) gives you 175,000 billion (approximately) at a resolution of 455 x 288.

Paul Stevenson, Birmingham

Er... ah... yes. Bending too low over the turps perhaps?

grams you run using SID and can be very useful when trying to figure out what a program does when run from CLI

A3000 vs 486

I've had an A500 for two years now, but have now come to the point where I want a big and powerful machine for my personal use and my father's business. I will later be studying computer systems engineering at university, so I need something I can use for homework as well. My first thought was to buy an A3000, but I had a chat with my lecturer at college and he thought me completely bonkers for having even considered it.

Many people I have spoken to have said the Amiga is a nice personal computer but no good for serious purposes, for which I'd need a PC. I know how brilliant a machine the A3000 is, but suppose it's a waste of money?

A 486DX 33MHz PC with double the hard drive space and 8Mb of RAM will cost me just over £2,000, whereas an A3000 will cost £3,000. Which machine is better overall, and will the Amiga last as long as the PC?

Tasos Frangoullides,London

There are two very important points to note in any argument over power and price between the A3000 and the supposedly "faster but cheaper" PCs.

The 486 machine you mention will probably be based on Industry Standard Architecture (ISA), which allows a 32-bit bus between processor and motherboard memory, but which will offer only 16-bit expansion slots. The Amiga 3000's design is entirely 32-bit, which is why 24- and 32-bit frame buffers such as Harlequin work so well with the machine.

Having said that, the A3000 is too expensive, a result of its being produced by only one manufacturer. In the PC world, where hundreds of PC manufacturers are fighting for a slice of the cake, prices have been dropping like trousers at a house of ill repute, and users can expect to pick up powerful equipment for silly prices.

The danger is that many manufacturers have been cutting corners to the extent that our sister magazine, *PC Today*, ran an editorial in their February issue on the subject of sub-standard or unreliable machines. The same cannot be said for the A3000.

With Commodore's machine you get a reliable and fast Quantum hard drive, Commodore's own monitor, and solid build quality. You also get an operating system (Workbench 2.04) which the PC can't come close to. Seven years after the release of the Amiga 1000 and its revolutionary operating system, Windows 3 and MS-DOS 5.0 still cannot offer the sort of multitasking which has served as the heart and soul of the Amiga since 1985.

For standard, everyday business uses, the PC486 is probably a better buy than the A3000, but if you're after true 32-bit quality and a modern computer with an operating system to match you still can't do better than the Amiga. It's your money.

Tablet trouble

I would like to buy a light pencil or drawing tablet as I find it very hairy drawing lines in freehand with the mouse. Datel Electronics make one, but I can't seem to locate any other makers of the devices. Could you please help me out?

Martyn Bater, Bristol

First of all, don't bother with light pens. They're nowhere near as accurate as a mouse or graphics tablet. Secondly, buy the Genitizer tablet from Datel and don't waste any more time looking for an alternative. We tested a few tablets last year, and the Datel unit was easily the best.

There are only a handful of tablets which have Amiga driver software in any case, and the Datel is easy to use, pretty accurate, and comes with a DPaint template to make things even easier for users of that package.

Rumblings in RAM

Having had my wonderful Amiga for almost two years now using it almost exclusively for music (thanks to MED), and graphics (thanks to DPaint), I have just recently wandered into AmigaDOS 1.3, and have encountered a few problems. When copying a file to RAM and then to another disk, the file sometimes seems not to have copied. If I am copying a directory all is fine, and the same goes for files that aren't in a directory. However, if I want to copy, say, PPShow from the C: directory to another disk, I have to go through about ten annoying disk swaps instead of copying it to RAM first.

My second problem is a little more straightforward. How do I change the default of an icon? I have tried doing this in Huge, but when I save the icon and reload it, it isn't there, just the writing underneath. I can't click on nothingness!

Lee Kirk Fagan, London

Your problems with copying are probably down to one of two things. Either you're sending the file to a location from which you cannot identify it, or you're trying to copy from RAM without the correct commands being available.

The former would arise in the case of C: directory files because they have no icons and are invisible unless you DIR every drawer on the disk or do a LIST DF0: ALL. You may have successfully copied the files to the wrong drawer, and then concluded that, because you can't find them, they haven't copied properly. To copy a file called MyFile from C: to another disk called NEWDISK without its own C: directory, you would use the following sequence of commands:

```
CD C:
COPY MYFILE TO RAM:
COPY COPY TO RAM:
COPY MAKEDIR TO RAM:
COPY CD TO RAM:
CD RAM:
```

at this point you'd eject your disk and insert NEWDISK:

```
MAKEDIR NEWDISK:C
COPY MYFILE TO NEWDISK:C
```

Now swap disks again and type CD SYS: to go back to your point of departure. Long-winded, perhaps, but unavoidable if you have a 1.3 machine and only a single drive.

As for your problems with Huge, you seem to be failing to specify what area of graphic the icon will comprise when saved.

On the Huge editing screen, when Save has been selected and you've confirmed the name the icon is to be saved under, you must then click and drag with your mouse to outline the area which will comprise the icon.

This is because Huge doesn't know if you've changed the brush or added stuff to the bottom, or so on. As long as you outline your box as soon as you confirm your save filename, your icon will be perfectly visible.

Turning monitors into TV screens

I've read in several publications that it is possible to connect a computer monitor to a video recorder instead of using a TV tuner, and in that way receive TV signals on the monitor. My A500 is linked to a Philips CM8833 and as it is set up in my bedroom I would like to use the monitor as a second TV.

I also have an old Akai VS-112EK VCR which has given up the ghost as far as recording and playback are concerned, but which can still be used as a receiver. Would you advise me on which cables and connectors need to be made or bought, bearing in mind that my monitor will also be used as my Amiga's VDU?

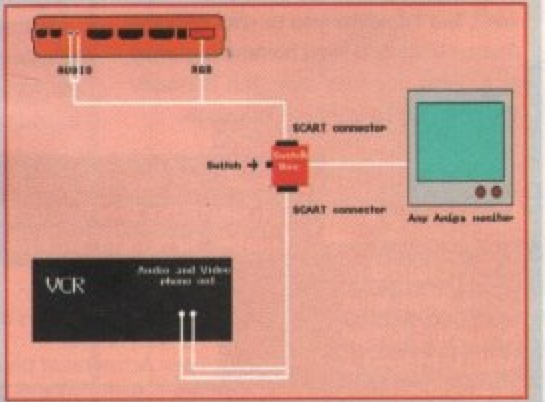
Dave Penny, London

For about 18 months now, I've had exactly the same setup at home as you describe above, and apart from the jumble of cables resulting from it, I've never had any problems. Unfortunately, you didn't say which model of CM8833 you are using. Some are equipped with Scart sockets, while the newer models have nine-pin RGB connectors. The only difference to your setup will be the sort of cable you'll need.

With the Scart option, the only other piece of equipment you'll need is a monitor sharer, such as the Trilogic box, to avoid having to change connectors every time you want to use the monitor as a TV (phone Trilogic on 0274 678062).

The lead from VCR to Scart box will have to have a Scart on one end to connect to the switch box, and at least audio and video outs of a standard phono type on the other end. I bought a lead like this from Lewis's video department, but they should be available from most decent video shops.

Plug the video and audio outs to the relevant phono sockets on the back of the VCR, then plug the Scart connector to your Scart sharer box. The sharer box will have a connection to your Amiga's 23-pin RGB socket, so plug this in and you have the inputs all sussed out.



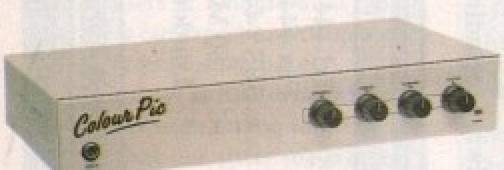
Output from the box should be by way of a Scart to Scart cable to connect to the CM8833, or a Scart to nine-pin RGB if you have the newer CM8833. Make sure the cable has audio leads separate to the Scart plug at one end or you'll have no sound on the monitor.

As long as the video recorder is turned on and its channel controls tuned in, you should be able to jump between your Amiga's display and a TV station by pressing the button on the sharer box. If you have a VCR whose channel selectors can be changed from a remote control unit, you will have effectively doubled up your CM8833 as a remote-controlled TV.

As an added bonus, the CM8833 has a very sharp picture when used for TV purposes, and is as good as many high quality portables.











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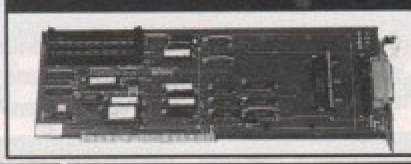
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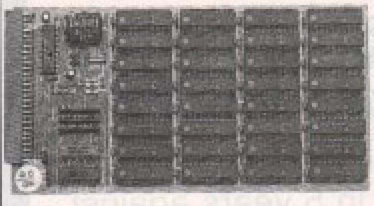
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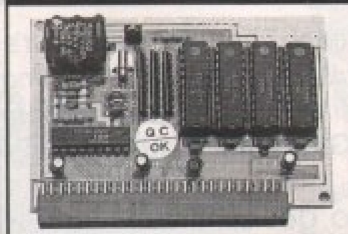
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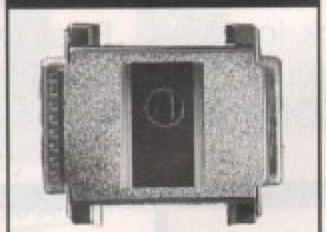
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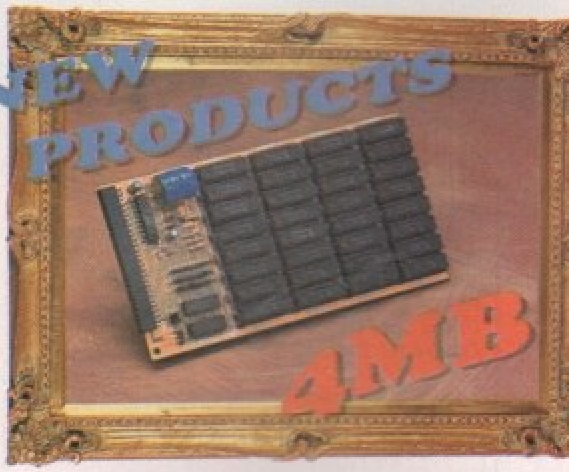
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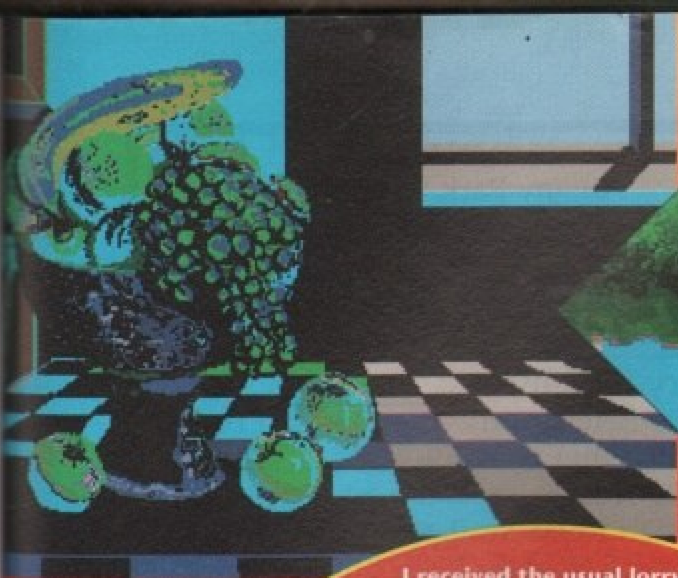
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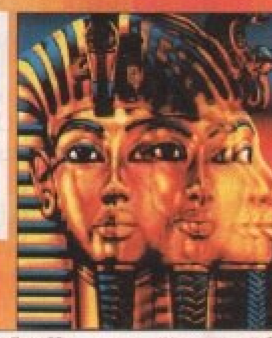


Lake – Martin Hargreaves



Madonna – R Wiley

the Gallery



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ELECTRONIC ARTS

Jonathan Maddock enters the plethora of digitised technicolor that we call The Gallery

I received the usual lorry-load of Gallery this month, so first of all I must thank all you eager Amiga artists who sent in your beloved artwork. Remember a copy of Deluxe Paint IV goes to our winner every issue!

The first artist this month is Martin Hargreaves from Lancashire who produced two delightful pictures using Deluxe Paint III.

They're entitled Fruit and Lake and are both excellent.

Football is the next subject. Soccer Salute was drawn by Paul Michalak from Staffordshire and very good it is too. The only disappointment is that it features someone who plays for West Ham, so almost didn't make it.

Over the last few months, a certain pop star going under the name of Madonna has been featured in Gallery quite a few times. Well the good news is, she's back! This time she has been sketched by a Mr R J Wiley who lives in Tottenham (come on you lot, let's have your first names, not just your initials – Ed). The picture is of a very high standard and obviously a lot of time has been spent on it. Well done Mr Wiley.

It was very tough to choose a winner, as it is almost every month, but the worthy recipient is Anthony Head. Anthony, who lives in Southampton, sent in eight pictures, all of which are particularly good.

Before I come to the winning picture I think some of Anthony's others are worth a mention. One of these is entitled The Haywain and is from the painting done by John Constable. It's taken over 100 hours to complete and as you can see it's absolutely amazing.

The actual winning picture is called Skull and it was created on Deluxe Paint III using just 32 colours. Anthony took two pictures, one of a skull and another of a volcano. They were then merged together using his IFF picture-merging program on AMOS, before smoothing using Deluxe Paint. Top marks, Anthony – your copy of Deluxe Paint IV will be on its way soon. That's your lot, but keep those pictures coming in!

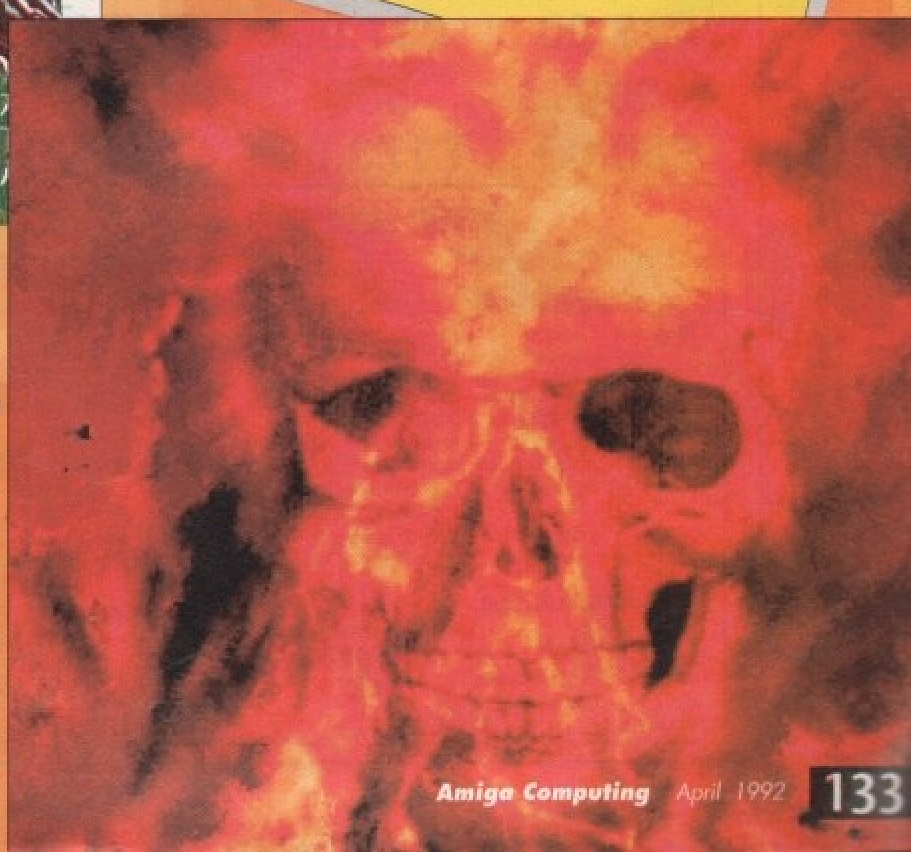


Soccer salute – Paul Michalak



The Haywain – Antony Head

This month's winner



Skull – Antony Head

Calling all artists!

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The creation of Catchphrase

Paul Austin sneaks into Soho and discovers the Amiga at the heart of a revolution in broadcast television

After the usual gruelling train journey from "up north", I found myself in the heart of "let's do lunch" country. Once an infamous hotbed of vice and promiscuity, now the domain of media moguls and spritzer-guzzling yuppies, Soho has hardly changed at all.

After removing my cap and discarding the whippet it was time to face the men and women behind the images which daily invade every living room in the land.

The Original Graphics Company were the reason for this particular excursion – an outfit who are spearheading the Amiga's introduction into broadcast TV. Still the ugly sister in the eyes of many production companies, the Amiga has had to fight hard for its place in perhaps one of the most elitist markets in the world.

After all, if you'd just spent a few hundred thousands on dedicated hardware, the news that what you considered to be a games machine could achieve much the same for a fraction of the cost isn't likely to leave you beaming from ear to ear.

To find out more on both the company and its ground-breaking approach to the business I spoke to Richard Burn, the man behind The Original Graphics Company. I asked him what triggered the Amiga's entrance into the very top flight of art and design.

He mentioned two primary reasons why an Amigan invasion seems likely. First is the 24-bit explosion which has revolutionised the output of the machine, and secondly the economic climate which has cut deep into the budget of both TV companies and advertisers alike. Production cost is now equally as important as quality and as the Amiga can offer the best of both worlds, it's going to become the ideal vehicle for the commercial artist.

A perfect illustration of the changing times are broadcast paint systems, formerly the essential tool of the commercial artist and costing anywhere between £70,000 and £80,000. Now a good deal of their expensive output can be matched by an Amiga, an accelerator, and a 24-bit board combination costing only a fraction of the price of even a second-hand system.

Unfortunately, there's a stumbling block which the machine will have to overcome if it wants to compete with the likes of broadcast 3D systems rendering 24-bit 3D images in a matter of seconds. The output quality is already there, but in a commercial environment speed is essential.

Hopefully the latest generation of 24-bit boards will address the problem thanks to the new Texas graphics chip which is already available on Progressive's Rembrandt board and reports to render any 24-bit image within 25 seconds.

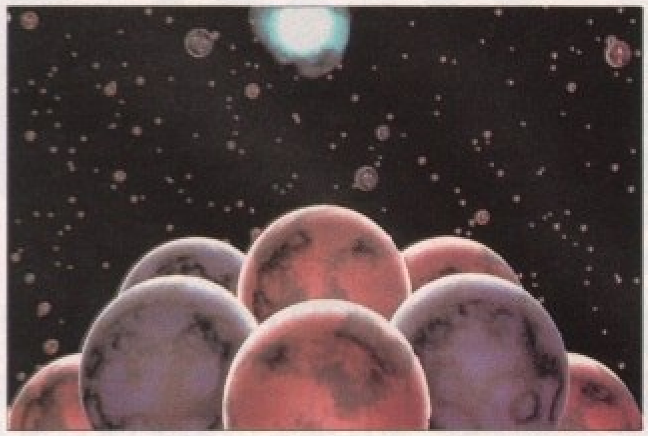
Standard

Another point raised by Richard was the need for a 24-bit standard to which all the boards could prescribe. Here again there is hope on the horizon in the form of Sage, an industry standard proposed by Progressive Peripherals and Digital Micronics at a recent meeting of American software developers.

If this new format is taken up by the industry, the Amiga could soon become its premier video graphic workstation, thanks to Sage's ability to provide support for the new generation of boards which carry the latest Texas chips.

If the hype is to be believed, these chips boast half the processing power of The Original Cray super-computer on a solitary chip! Once an industry standard does emerge, Original Graphics plan to turn all their machines into 24-bit workstations. Only time will tell...

At present the Amiga is still only a relatively small part of Original's repertoire, but given the enhanced speed and profu- ➤



A single frame the mammoth Equinox animation



Original's marketing man hard at work inspecting the anim's of would be Employees



The catchphrase creative team at the controls of their Amiga allies



sion of 24-bit cards under a single, unifying format, the potential is limitless.

After reminiscing on the rise and fall of various machines and the ever-declining fortunes of our country's economy, it was time to look back at the recent successes which make The Original Graphics Company one of the names in the business.

Perhaps the most famous example of their work is the award-winning Motormouth title sequence which recently clinched the Best Title Award at Computer Graphics 91. Apparently, the characterisation of the objects is loosely based on the presenters themselves – a connection which I find difficult to make, with the possible exception of Andy Crane.

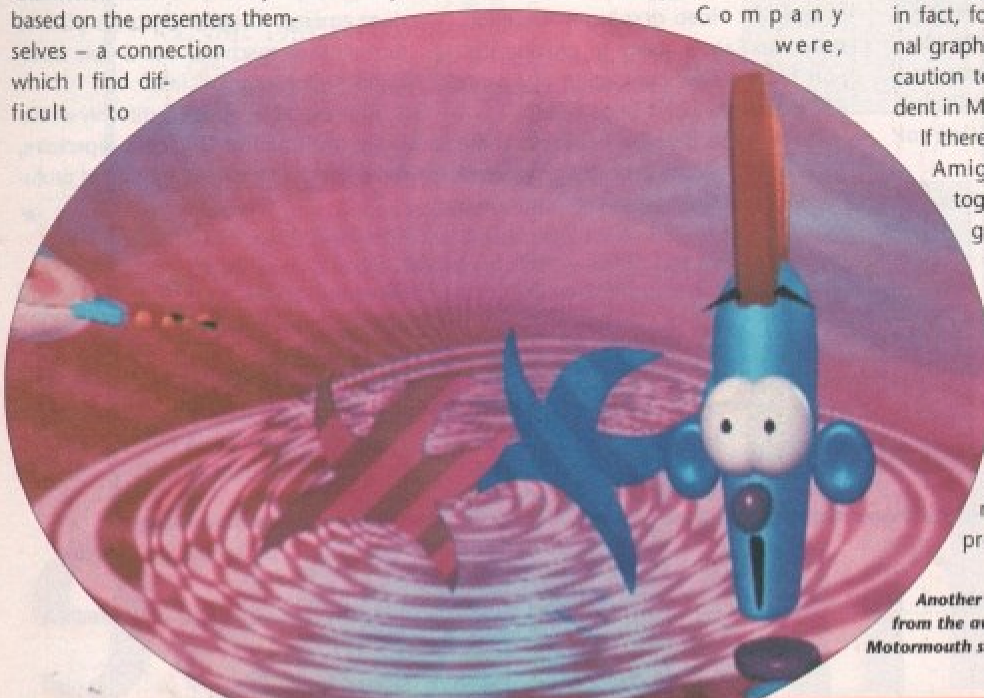
Other notables include a mammoth eight-minute sequence depicting the evolution of the universe, screened over the Christmas period as part of an Equinox production entitled Unravelling the Universe.

More regular work includes titling and animation on Mid-Week Sports Special for Thames, plus weekly news graphics for LWT as well as countless other smaller productions.

All of the above add to the staple diet of advertising and design work for TVS. The Original Graphics Company were, in fact, formerly the station's own internal graphics department, but they threw caution to the wind and went independent in March 1990.

If there's one thing which brought the Amiga and Original Graphics together it was Catchphrase, a programme which Original Graphics have been jointly involved in for the last three series, even before their split in the spring of 1990.

As with almost all game shows, Catchphase is a trans-Atlantic import which has been customised for the UK market. Originally the show was produced in the States using an ageing system, but since the Amiga was suggested as a replacement for the American system and with the program now entering its eighth series, the marriage appears to be a happy one. So now you know who's to blame for the ever-present Mr Chips and that immortal line "It's gooood, but it's not right..."!



Another impressive still from the award winning Motormouth sequence

Ardent

The culmination of their three months of ardent animation is one solid week of shooting during which all the shows for the entire series are shot. By all accounts the process is an expertly planned logistical exercise, with contestants being moved in and out every hour, perpetually ready to join once more in mental combat with the next opponent.

It remains for me to thank The Original Graphics Company for their co-operation, coffee and friendly conversation. With the naturally expansive nature of the Amiga's architecture and the assistance of companies such as Original Graphics, the machine's future at the very top flight of commercial video graphics is assured. AC



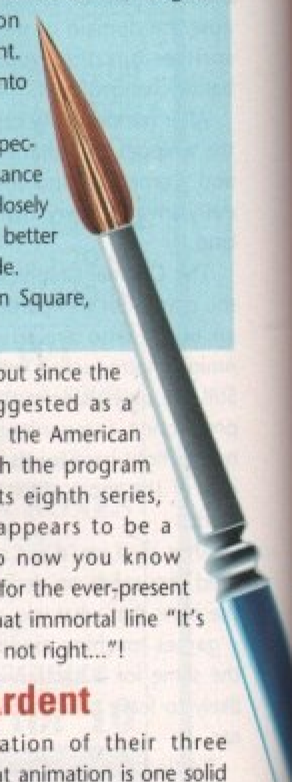
Artists required...

If you have the skills and want to break into the glamorous world of commercial TV, Original Graphics are always on the look out for new talent.

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Don't be put off if you're a humble DPaint user, as all the prospective show reels I saw were compiled at least in part with the assistance of this paint package. Having said that, do scrutinise your work closely before you apply for the job. If you can't match or perhaps even better existing commercial art you almost certainly won't make the grade.

Send your entries to: The Original Graphics Co., 8 Golden Square, London W1R 3AF



Animated Amigas – how it's done

To find out how Original Graphics go about the creation of Catchphrase I spoke to the man at the heart of the production process, Jonny Bradley. A commercial artist with perhaps more years in the business than he'd care to recall, he's now the animation co-ordinator of Catchphrase, managing the production of the anims and the impressive array of Amigas which create them.

Before we delve into the production cycle it's worth taking a closer look at the network of Amigas which do the hard work in both the TVS studio and The Original Graphics' head office in Soho.

The actual production of the anims takes place in Soho with its internal network of four Amiga 2000s, all running with accelerators and boasting internal hard disks plus a 300Mb external for general use.

Jonny's task is to keep both the Amiga network and his team of animators as productive as possible. Once the anims are complete, a 40Mb removable hard disk is employed to transport their creations to the studio and its collection of eight unaccelerated Amigas, all controlled by a single long-suffering operator who supplies the necessary anims live and on demand for the show's production team.

Besides the technical difficulties of managing one of the largest Amiga systems in the UK, there's the production and management of a frighteningly large number of anims which the show eats its way through during each series. 1 On average Jonny and his team produce between 700 and 1,400 per series, with each show disposing of between 60 and 80. All are lo-res 32 colour creations running at five frames per second. It's perhaps not the best format in which to display the Amiga's graphic, but it's the format the producers like, and one which has been successfully employed since the show's conception in the States. Also, it has the added benefit of being relatively conservative on both storage, loading time and RAM.

The next burning question was – who's responsible for the phrases themselves, and how are these seeds cultivated into a finished anim?

The actual themes for the anims are provided Simon Ross, brother of Jonathan and the inspiration behind many a UK game show. These ideas are then worked up into potential anims during a meeting between Original Graphics and TVS. When all parties are happy, the production cycle can begin, with Jonny and his team putting mouse to mat on their mammoth task.

To avoid repetition, Jonny has written a SuperBase 4 utility database which keeps track of all the anims in their immense library. Any anim in the collection can be located in seconds by simply typing in the anim title or even just part of it. Once located, the anim can be loaded internally or directed to a specific artist on the network.

I asked whether there are any plans to update the anims within the show. Jonny suggested that there may be the odd bit of morphing and translucency courtesy of DPaint4, but this is a program which Jonny and his two-man production team didn't have an awful lot of praise for – putting it very politely.

Ooopps...

I'm afraid it's time for an apology. In last month's Art Special, Gareth Morgan of The Original Graphics Company was credited for the creation of the company's award-winning MotorMouth title sequence.

In fact this is not the case. The creator is in fact Richard Squires, another employee of the company and the real man behind the masterpiece. Although Gareth Morgan did play a part in its production it was in purely a supportive role.

We must stress that it was a case of crossed communication and apologies once more to both Richard, Gareth and Original Graphics for any confusion it may have caused.

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Using

Clever use of ARexx functions will turn your computing chores into a breeze! The general uses of scripts/macros fall into two broad categories (macro and script are fairly interchangeable words, although "macro" usually refers to smaller function-like programs). First are those which are complete programs in themselves – anything from simple file management utilities all the way to complex applications. Secondly, those that act as sub-programs, and may be called to perform a useful function from anywhere.

Not only is it possible to have functions in your ARexx macros, but macros themselves can serve as functions, if you so wish! Any ARexx program can be called from any other as a sub-program. This may be either a function or a command, as we will see later.

Over time, you will build up a collection of useful scripts to deal with your routine work, many of which will be based around functions. The beauty of this is that they will be available from your familiar environment at any time. No need to load up an interpreter or to struggle with AmigaDOS. You can type them in from the CLI, or even launch them from an icon. With ARexx-compatible applications, their power is at your fingertips without even leaving your application program!

Your imagination is the only limit on how to use ARexx – a statistical function to do summations, calculator style? A customised front-end with requesters and menus? A text reformatter for MS-DOS text files? A complex file-management operation? A simple graphic screen? You name it!

In fact there are four basic levels of function in ARexx. When a function is called, the system searches for it in the following order:

1. Internal functions defined within the program
2. Built-in functions
3. Support libraries/function hosts
4. External programs/macros

Within any macro the function names are all global. You therefore have to be careful that your functions are uniquely named. Otherwise the system will use the first definition it finds. For instance, if you have a support library function called tan(), and you define an internal function with the same name, then the internal one will be used!

There are two ways to use functions in ARexx. One is to use the instruction CALL, followed by the the name of the function and its parameters. The parameters may themselves be expressions that get evaluated. The value is then returned in a special global variable called RESULT.

The function may also be used directly as part of an expression, eg a=tan(45) or say reverse ("abracadabra"). This is fairly standard behaviour, as you would expect from any language.

When writing functions of our own, whether these are external macros or internal functions, we will need to know how to pass data to them and how the result is returned. Now let's examine each of the four types of function mentioned above.

Internally-defined functions are defined within a program by the use of a label clause – ie the name of the function followed by a colon. The values supplied to a function can be read using the ARG instruction or the ARG() function (there is no limit to the number of parameters that can be supplied to an internal function). The function exits and returns a value to the main program via the Return instruction:

```
 /* Example 1. Use of a function (hypot) -
calculate the long
  side of a right-angle triangle from the other
two lengths */
   call hypot(4,3)
   say result
   exit
   hypot:            /* the function label */
   arg s1,s2           /* read in the parameters */
   len = sqrt(s1*s1+s2*s2) /* assume sqrt is
defined */
   return len
```

In the above example we used the ARG instruction to read values into our function. We could also have used the built-in function ARG(), where the parameter given to ARG() returns the corresponding variable. ARG() can also be used without arguments, in which case it returns the number of arguments to a function (in the above example, two). The above program could also be written:

```
/* Example 1 v.2 */
say hypot(4,3)
exit
hypot:
s1=arg(1) ; s2=arg(2)
return sqrt(s1*s1+s2*s2)
```

The Exit instruction is used to mark the end of the main program.

There is still one more aspect of internally-defined functions to be discussed. When a function is normally defined, as described above, all the variables it uses are global – if their value is altered, it is altered throughout the program.

The instruction PROCEDURE will make all the variables in a function private to that function (it is also possible to have mixed private and global variables by using the keyword EXPOSE after the PROCEDURE instruction). This allows recursion to be used in ARexx programs. We will not deal with this in detail at the moment, but the following example should serve to illustrate:

```
/* Example 2 - Procedures */
var1 = 111 ; var2 = 222
var3 = testfn(3)
say var1 var2 var3
exit
testfn: PROCEDURE EXPOSE var2
var1 = 444 * arg(1)
var2 = 555 * arg(1)
return var1
```

The output of this is 111 1665 1332.

Built-in functions are part of the language itself, and include functions like ARG(), ADDRESS()- which returns the current host address, ADDLIB()- for adding support libraries, the format conversion functions, the bit-manipulation functions, the ARexx system functions and so on.

ARexx can use special libraries of functions to extend its capabilities. One of these, rexxsupport.library, is provided as part of the package. These libraries reside in libs:, but are not the same as standard Amiga shared libraries. Writing them is a job for system programmers, and out of

functions in ARexx

Interacting with your computer can be made easy with ARexx functions. Alex Gian shows you how

the scope of the average user. However, there are many extremely useful and freely distributable libraries already available. They include system functions, graphic functions, and scientific functions. One of these, rexxmathlib.library is included on this month's CoverDisk, and will allow you to use advanced math functions from ARexx.

ARexx keeps a list of its special support libraries. A library can be added any time either from the CLI, using the special rxlib command, or from within ARexx, using the ADDLIB() function. Both of these take four arguments – the library name, the priority of the function (usually 0), the offset (-30), and the version number.

A typical entry would be, from the CLI:

```
rxlib rexxmathlib.library 0 -30 0
```

or from ARexx:

```
ADDLIB(rexxmathlib.library,0,-30,0)
```

Function hosts are specialised programs that offer function facilities to ARexx when they are run, and behave similarly to support libraries. We will look at them in a future article.

Finally, we will look at how to write complete ARexx programs that behave like functions. Remember that these external macros will be global, not only to the calling program, but to the whole ARexx system.

If ARexx searches for a function, and it is not found among the internal, built-in or support library functions, it then proceeds to search the current working directory, rexx:, and any specified directory paths for any program with the same name as the function. It will also recognise macros with the standard ARexx suffix .rexx, or other special name extensions of ARexx compatible programs – see below.

Parameters are passed to macros with the ARG instruction or function as we have already seen. External functions are limited to accepting 15 parameters. Their values are returned using the EXIT instruction. Look at the following example macro:

```
/* Example 3 - add up some numbers */
say "AddUp macro received " arg() "numbers"
sum = 0
do i = 1 to arg()
sum = sum + arg(i)
end
exit sum
```

Save this macro as ADDUP.REXX in your current directory or in rexx:. You can now call it from any other ARexx program. Note that this macro will not only add up the numbers you supply (max 15) but will also print out the number of arguments. Try it:

```
/* testing.. */
say AddUp(1,2,3,4,5)
```

or just type:

```
rx "say AddUp(1,2,3,4,5) at the CLI
```

So long as ADDUP.REXX is present in a directory accessible to ARexx, it will be available to the system as a function! We trust that you will now be encouraged to experiment further on your own.

● Next time we will examine parsing in detail, and also work with some programs that support a custom macro language.

Competition for ARexx?

A new US utility called HotLinks looks set to provide ARexx with its first serious challenge as a tool for interprocess communications. The first package to be shipped with HotLinks support is the excellent PageStream 2.2, and if the utility is adopted by other manufacturers the prospects for Amiga inter-program wheeling and dealing could be radically improved.

Packages with HotLinks support simply "publish" their text or graphics files and any other HotLinks compatible program can "subscribe" to them. This means a DTP package could publish its text files for a word-processor to edit or its IFF bitmaps for DPaint to touch up. When the other package has finished with the file, it simply "updates" the file and HotLinks will update all other versions of the file being used by HotLinks-equipped utilities. Look out for more information on this exciting new interprocess utility as we receive it.

Interprocess communication

We have already said that macros can be run either as functions or as commands, and the canny user will already have sensed this possibility. All that is needed to run a macro as a command is to send it to a valid ARexx port.

Remember that anything which is unrecognised by ARexx – including external macro names – is automatically assumed to be a command. Most applications with an ARexx interface include a custom macro command language of their own. These commands allow ARexx to control the application program. Many of these commands can accept arguments, and also return results.

In this, commands are much like functions: Reading of parameters is achieved with the usual parsing instructions – ARG etc – although it is not as easy to give a variable number of arguments.

For ease of use, custom commands usually take a fixed number of arguments, most often just one. Results are returned via the EXIT instruction, as usual. However, the way that the result is returned from a command is different to that of a function. When a command EXITs with a value, ARexx deals with it as a return code, not unlike the return codes used by AmigaDOS.

If we want to use the returned result, we can copy it to the global variable RESULT, with the instruction OPTION RESULTS:

```
/* Example 4. ADD2BIN - Add two numbers and
return their binary representation */
arg a b
c = D2C(a + b)  /* D2C and C2B are built in   */
c = C2B(c)      /* format conversion functions */
exit c
```

Save this macro as add2bin.rexx, and run the following macro:

```
/* Testing.. */
options results
add2bin 2 3
say result
```

or just type:

```
rx "options results ; add2bin 2 3 ; say result "
```

at the CLI (remember to close the quote, since there is more than one clause). Try doing it without the OPTIONS instruction too!

You might wonder why we should bother with commands, when we have functions, or vice versa. There are a number of reasons, not least of which is that commands are easier to implement on programs with ARexx interfaces.

2 DISKS

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2 GOOD TO MISS!

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24-bit blues...

Paul Austin takes a closer look at the hardware and software combination that could transform budget DTV

Regular readers will be well aware of the recent 24-bit explosion, but for most of us such equipment is strictly the stuff that dreams are made of. Systems like the IV24 and Harlequin barely scrape in under the £2,000 barrier and as a result it's hard to imagine how the average enthusiast could possibly get in on the act.

Fortunately there's a digital knight on the horizon ready to save our artistic souls from the clutches of bog standard Amiga output – without demanding a king's ransom in return. DCTV is that knight, and over the following article you'll find out what exactly makes it so special...

First and foremost is the price, for at under £500 it makes most of the opposition look positively extortionate, especially when you consider that it includes all the software – unlike Harlequin and the G2's Imagic, both of which require extra expenditure on software.

In the case of the Harlequin such little extras will set you back a frightening £800 for the latest version of TVpaint.

The second point concerns DCTV's output. Unlike most of the other formats, it produces composite as opposed to RGB – a point which the purveyors of other equipment are at pains to point out. However, for DTV purposes this makes little or no difference, as composite output is exactly what we need, so the necessity for RGB is negligible anyway.

Even so, if you feel the need for RGB, the system is happy to supply Raw 24-bit files on request. It may employ composite as its display format but internally it's as true a 24-bit system as the rest.

Aside from the software's obvious painting features, perhaps the most important aspect in the eyes of the average DTV fan has to be its ability to grab from a video source. With such power, all kinds of avenues open for the creative producer. Any element within a production could be grabbed and combined to produce stylish intros, animations and backdrops for titling – the potential is endless.

Unfortunately, unlike more expensive systems such as the IV24 and Imagic, DCTV's grabbing abilities aren't instantaneous, but on the other hand it doesn't require investment in extra hardware in the form of composite splitters as do both of the above – assuming you're not using an RGB source, of course.

Normally, a ten second importation time would appear to be a real disadvantage. However, considering all the images you see were grabbed from a standard VHS perhaps it's not as bad as you might at first imagine. Admittedly the VCR in question does boast a good quality pause, but it's nothing special and could easily be matched by many a modern unit.

After the initial excitement of twiddling with the excellent paint package I was ready for an anti-climax concerning the protracted grabbing process. However, I think the results speak for themselves.

If you're thinking of getting into high quality video graphics you'd be well advised to look long and hard at DCTV. After all, a system that Commodore are already supporting via CDTV can only go from strength to strength, thanks to enthusiastic external developers and Digital Creations' own hardware enhancements.

Cutting corners

To be fair to the opposition, there is a price to be paid for the conversion to composite. For a start there are the restrictions of the format itself. No matter which way you cut the cake, composite output does not match RGB. As a result certain compromises have to be made. Although this sounds a little dramatic, these are exactly the same restrictions that TV producers have had to deal with for years.

The main pitfalls to avoid are extremely high colour saturations and densely packed alternating bright and dark colours. The first problem is easily solved – as long as colours do not exceed a saturation of 191 or 12 in terms of the average Amiga paint package, all will be well.

If you do exceed the 191 benchmark you'll start bleeding profusely – not a pleasant experience. As for the second restriction, it's a case of careful planning. Just as TV producers avoid presenters in plaid jackets, we need to avoid miniaturised chequered landscapes – not a bad thing for a machine that's had more than its fair share in the past.

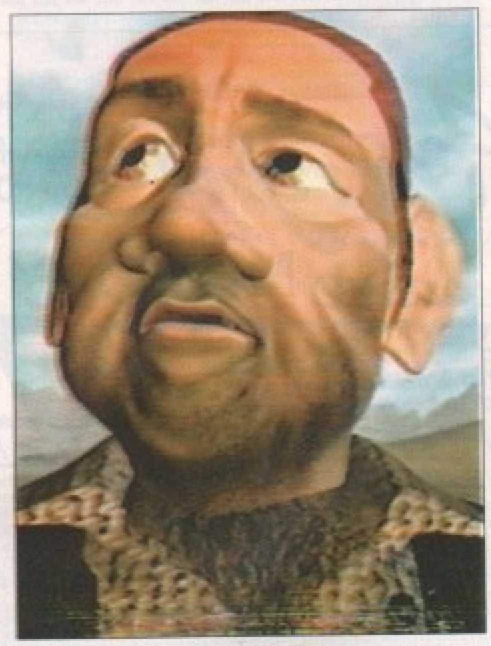
RGB soon

DCTV's 24-bit potential may soon be exploited even further, as Digital Creations intend to expand their present hardware by releasing an RGB enhancement which will allow DCTV to produce true RGB output. At the moment details aren't clear, but in whatever form it takes it's sure to add even more potential to an already impressive product.

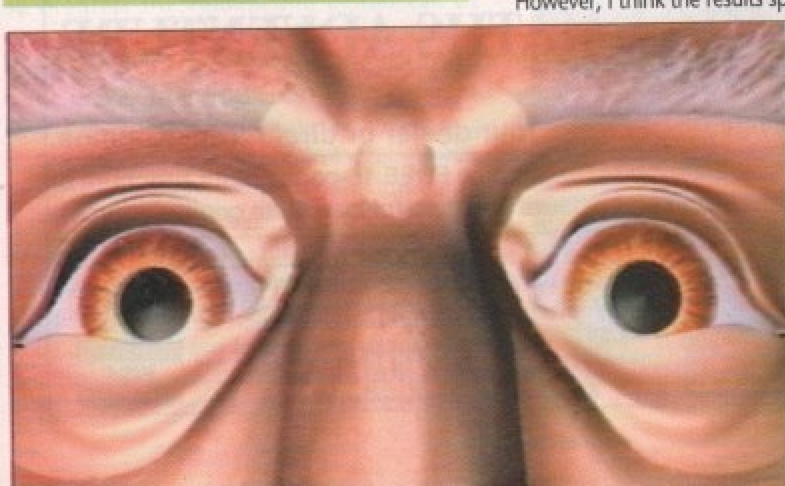
At worst, the new add-on will take the form of a composite-to-RGB converter which hopefully will give DCTV genlocking potential, something which at the moment is the system's only real Achilles' heel. For the time being, the composite-only output does leave genlocking out of the question as almost all available Amiga genlocks require a standard 23-pin RGB out.

At best the new addition will glean its signal direct from the hardware. Quite how this could be achieved eludes me but if it were possible it would mean that signal degradation caused by the conversion of composite back to RGB could be avoided.

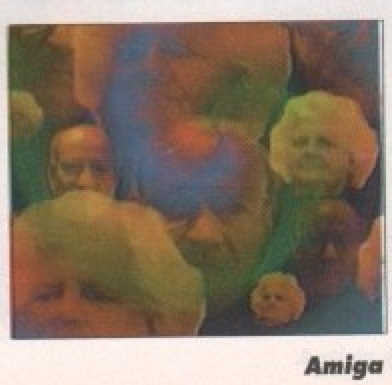
This mystery addition should be available some time within the first part of the year. At present Digital Creations are keeping tight-lipped about the details but it is confirmed that work is in progress. As soon as more information emerges you'll be the first to know...



More obvious signs of paused importation as close inspection of the image shows



A close up of incredible clarity considering DCTV's bargain basement price tag



Pensioners in seventies flashback shocker...

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Tuning up

Margaret Stanger with the final part of her series on programming sound

This programming Almanac is the last in a mini series on sound. The first part of the series showed how to produce a sound by writing to the Amiga custom chips directly with a pointer to the chosen sound samples.

The second part demonstrated how to vary the pitch of the sound and produce a few musical notes. Last month's column shows how to use the Amiga system software to control the start and finish of each note, leaving your program to do more important things.

This month I'll use routines from the Audio device to run a very simple music driver.

When the Audio device is opened, the associated IO parameter block contains all the structures needed to handle incoming and outgoing messages. There is a Message structure with a node for keeping its place in a linked list, a message port for replies, the length of the message in bytes, and an extension for audio data.

An allocation port is set up to allocate the sound channels, and an allocation IO structure for its commands. This port and parameter block are associated with the opening of the audio device.

A message port is opened for the sound channel, to serve as a collecting point for messages to a task:

```
move.l  #-1,d0
jsr _LVOAllocSignal(a6)
;allocate signal bit
cmp.l #-1,d0
beq  errorfound
lea soundPort0,a5
;set up sound port
move.l #sound,LN_NAME(a5)
move.b #0,LN_PRI(a5)
move.b  d0,MP_SIGBIT(a5)
move.b  #0,MP_FLAGS(a5)
move.b  #4,LN_TYPE(a5)
;as message port
move.l  #0,a1
jsr _LVOFindTask(a6)
;find current task
movem.l  d0,MP_SIGTASK(a5)
;attach it to sound port
lea  soundPort0,a1
jsr  _LVOAddPort(a6)
;add sound port to list of ports
```

To start a sound going, the parameters are put in the channel's IOAudio structure, the command is CMD_WRITE, the flag is ADIOF_PERVOL, and the BEGINIO command is used. Once the sound is in progress the volume and period can be changed with the ADCMD_PERVOL command (ADOF_SYNCYCLE and ADIOF_PERVOLflags), and the changes are made automatically at the end of the current sound cycle.

This means that if the notes of a tune always use the same sound sample – same instrument and a range of an octave or less – it is possible to reproduce the tune very easily.

I have used conventional Sonix type codes for the pitch and duration of the notes. The pitch code comes first, and increases by one for each semitone above low C. So C would be 0, C# or Db would be 1, C' would be 12, C'' would be 24.

All notes in the program have codes between 24 and 36, except for rests which are code 128. To find the pitch and duration codes of the current note:

```
move.l tunestart,a0
;start of tune
move.l gotto,d7
;offset from start
move.l 0(a0,d7.l),d0
;find pitch code
move.l 4(a0,d7.l),d2
;find duration code
```

To find the correct period for the note, and put it into a register, subtract 24 from the pitch code, and multiply the result by 2:

```
lea  perval,a0
move.w 0(a0,d0.l),d5
```

where perval contains the lookup table of period values for the octave. The sound can then be updated with the new period and volume values.

The duration codes also follow Sonix conventions with 0 for a semibreve, 1 minim, 2 crotchet, 3 quaver, 4 semiquaver etc. Since I am using a sinewave sample with a very short cycle, the note continues for a given time interval rather than computing the necessary number of cycles. To calculate the correct time interval, and put it into memory:

```
lea  cycles,a0
asl.l  #2,d2
move.l 0(a0,d2.l),delay
```

where cycles is the start of the lookup table of interval values. The timer is set with this negative value, and the next note can start when the timer value is zero and the interval has elapsed.

This music driver is very limited, and can only be used for music with a limited note range, using a simple waveform with a very short cycle. Serious music requiring many octaves, channels and changes of (real!) instruments would be written differently and take many hours of coding.

The C source code

The C source code can be compiled, and linked to the assembler source module using the command blink with sound4link where sound4link is included on the support disk, along with both object modules, sound4.o and soundc4.o.

The C program opens a window, and calls initsound() from the assembler module to open the Audio device and initialise the sound structures, and timerdevice(), to open a timer device. The Amiga starts playing an irritating little tune.

The main polling loop for the window continues until the user asks to quit,either by closing the window or pressing key 9.

Each time a key (1 to 5) is pressed, the program changes the tune by calling the appropriate assembler routine. Key 8 will stop the sound, key 6 will turn it back on, and key 7 will muffle it a little. When the quit signal is received, the program calls the clearsound() and closetimer() routines from the assembler module before the window closes and the program ends.

• The next programming page will be something completely different – reading and writing data files for C programmers.

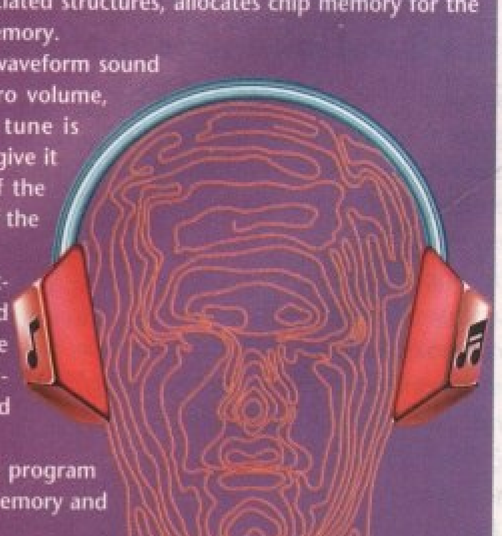
The assembler source code

The assembler source code (sound4.a) is a standalone program. The program opens the Audio device, and the Timer device, sets up the associated structures, allocates chip memory for the sound sample, and copies the data in to this memory.

A note is set going in channel 0, with the waveform sound sample data and length, no sound cycles, zero volume, and arbitrary period. The first note of the tune is played by changing the period of the note to give it the correct pitch, and changing the volume of the sound. The system time is set to the duration of the note.

When the time interval elapses, system software is used to change the period of the sound for the pitch of the second note, and reset the timer for the appropriate interval. The tune continues with notes and silences (zero volume) and automatically starts again when it has finished.

When the joystick Fire button is pressed the program closes the Audio and Timer devices, frees any memory and exits.



Sounds easy

Paul Austin looks at X-OR – a new breed of patch editing and librarian software from the creators of KCS

Since the early days of electronic music there's been one area in which many a valiant muso has come to grief – the sometimes excruciatingly painful patch editing process. If you speak to any old hand who's had the misfortune of programming a synth manually you'll hear a tale of woe equalled only by the demise of Spinal Tap.

An alternative to key punching and amp kicking was desperately required. Fortunately for us all, the computer entered the musical arena and not only revolutionised sequencing but brought the added bonus of computerised patch editing.

Unfortunately this wasn't quite the saviour it could have been, thanks to the insistence of the various instrument manufacturers of devising their own – usually vastly differing – approaches to system exclusive information. As a result almost every instrument on the market requires a separate editor. Not only expensive, but just a little annoying.

Enter X-OR, or to use its full title, the Universal System Exclusive Orchestrator. With this in your software collection the expense and irritation of the past could all be over. X-OR is the Amiga's first universal editor. In other words, no matter what your collection of synths, X-OR will happily converse and edit them all.

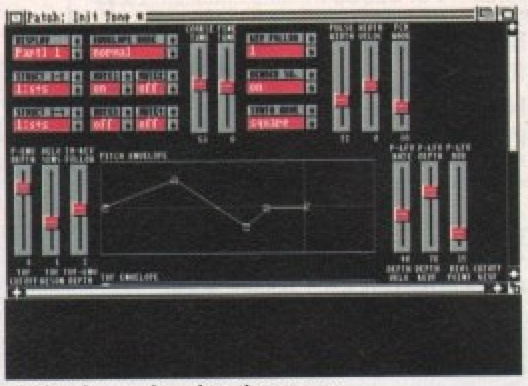
Profiles

To achieve this, the program employs instrument-specific profiles which hold all the relevant information for that particular instrument such as protocols, patch formats, parameter ranges and so on. Armed with the appropriate profiles X-OR can literally learn your system and address up to 128 individual instruments during the editing process.

This individual approach even applies to identical synths. If for example you own several DX7s, a separate profile could be applied to each. As a result, you'd be safe in the knowledge that all edits are guaranteed to head in the right direction.

Perhaps one of the strongest aspects of the profile approach is that once written a profile is universal no matter what machine it originated from. If, for example, a profile was produced on a PC or perhaps a Mac, it would work perfectly on an Amiga – all that's required is that it be transferred onto an Amiga disk.

Two disks full of profiles come as standard and if that's not enough, Dr.T's affiliated BBS is online with more. Even so, it's worth checking your system details with Zone before you invest, as X-OR without the correct profile is next to useless.



Editing the sound envelope the easy way. A simple click and drag for instant results

X-OR's flexibility certainly gives it instant appeal to well endowed musos but once a conversation is struck up with your system it's the software's editing abilities that become equally as important.

Fortunately, I doubt there'll be any complaints. Although patch editing is much the same no matter what the computer or instrument, X-OR does manage a few surprises.

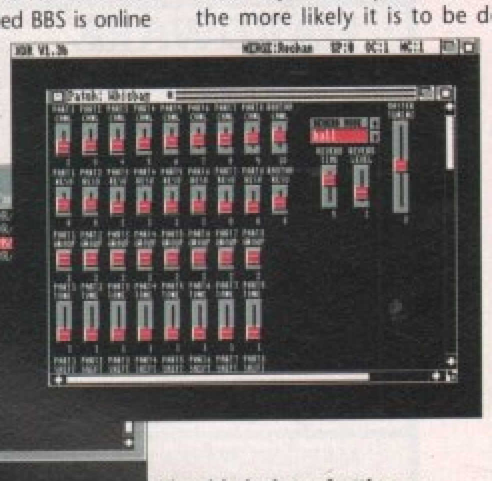
First is the program's patch blending features, something new to the Amiga and sure to secure almost as many sales as the program's varied range of instruments.

With the new blending and mingling options, two individual sounds can be combined over a selected number of patch positions, each graduating from the primary to the secondary sound.

For example if you had two bass sounds, both with their merits but nevertheless still not quite fitting your needs, you could create an empty bank, copy the first patch to position 1, and the second to 128.

If you then applied the blend option, 126 separate mixtures would be created. All you need do is pick the ones you want and save them to the synth or associated library on disk. If you wanted to retain a particular aspect of a sound, a mask function could be applied to guarantee its place in the new patch.

The second option is to mingle the two sounds. This differs from blending because individual algorithms are randomly selected from each sound. The closer a particular patch is to either source sound the more likely it is to be dominated by that sound's particular parameters.



Blanket channel changes in seconds via the mouse



The tricky business of setting up a system, painful at first but well worth the initial effort

Both blend and mingle have optional random modes to add more spontaneity to the mixture plus there's an option to apply the process to raw parameter data to produce even harsher variations.

Once you're happy with your creations and are ready to make some changes, X-OR's abilities as a librarian come into their own. During the setup X-OR learns where to store and retrieve relevant information which makes live editing instantaneous. Global performance settings can be installed in seconds, while individual patches are loaded, saved and copied on command.

Another pleasant feature is X-OR's ability to filter its selection process, making patch retrieval even within huge libraries extremely swift. Sounds can be sorted like a conventional database using dates, times and names as search parameters or alternatively you could employ the more subtle approach of Keywords.

Descriptive

For example you might use overall headings such as guitar, piano, strings and so on, then append to these more descriptive additions such as rocky, soft, smooth, classic. To locate a particular sound you could simple ask X-OR to find a smooth guitar. The program toddles off to the library and returns with a selection of appropriate sounds.

Once installed, you can listen to your latest immigrant via the mouse. Simply moving the long-suffering creature about the screen to play the new sound in the velocity and pitch of you choice.

X-OR is an impressive product, but if you're more interested in playing than tinkering, investment in an extra module might be a better bet. Programming the system is about as much fun as the average tax return but once programmed X-OR never forgets. A good understanding of Midi – and your instruments – is a big advantage, whilst a pile of sequencer manuals is an absolute must!

For the professional who's looking to get the best from an extensive collection of synths, X-OR is an invaluable tool that's well worth the investment in time and money that exploiting it properly requires. In short, serious software for serious musos...

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Small is beautiful

With ever-increasing online costs, Stewart C Russell looks at archivers and de-archivers as a way of saving money. Plus an overview of the state of the Amiga comms scene

The phrase "time is money" appeared long before anyone thought of computer communications, but it's extremely apt. The longer you are on the phone, the more it costs, and there's not much you can do about it except send less data.

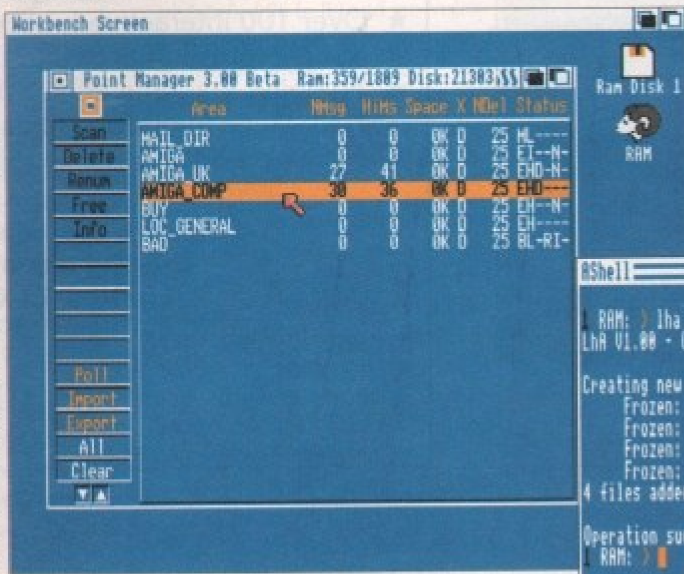
But most of the data we deal with contains repeated information, and computers can apply their brute force and ignorant grinding capabilities to strip this redundancy out. If we require the data to be readable again, the process can be reversed to rebuild the original structure.

For a long time, the standard compression program for the Amiga has been Lharc, which generates archive files with a .lzh file extension. Original version of Lharc were terribly slow, but optimised versions have appeared which allow large archives to be made quickly on an unaccelerated Amiga. Over a typical mix of files, Lharc might compress the data down by 55 to 60 per cent of its original size.

The latest Lharc program is LHA from Stefan Boberg. To say it is fast would be a wild understatement – it is easily a third faster than the best of the rest (LZ, from Xenomiga Technology) which claims to be written in highly optimised assembly language.

LHA has two distinct advantages over Lharc, apart from the raw speed. Firstly, it supports a better compression technique which looks at the data through much larger "window", giving 65 to 70 per cent compression on normal data. This LHA compression is compatible with the program of the same name on the PC.

Secondly, LHA can create self-extracting archives. These don't need an external utility to extract them – just run them, and they rebuild the original files. These SFX archives are slightly bigger than normal archives – they need to contain the decompression code – and they provide yet another hiding place for viruses. They're useful to have though – LHA is distributed in one (lha_e100.run), as otherwise you'd need LHA to uncompress it!



Point Manager 3.00 fills in the gaps present in PM 2.05. Great comms tools such as this ensure that Amiga Comms has a rosy future



Stefan Boberg's LHA took 130 seconds to crush over 360K of data down to less than a third of the original size on an A500

Another compression program is Phil Katz's ZIP, which is extremely popular with PC owners. It tends to compress slightly better than Lharc, and nearly as well as LHA – around 60 to 65 per cent would be typical.

There has been a ZIP program for the Amiga (PKAZip) for a long time, but it suffers from a slow graphical control system and a few incompatibilities with PKZIP on the PC. A new set of ZIP programs (ZIp and UnZip) have appeared, and they seem to address most of the problems.

ZIp (yes, the upper case "I" is not a typing error) has been designed such that it can be compiled and run on just about any machine. The portability penalty is a decided lack of speed, but at least it works, which is more than can be said for PKAZip.

UnZip isn't so rapid either, but it will extract, list and test any ZIP archive around. It cannot deal with the very new PKZIP 2.0 (PC) archives, but then the only program which can is – you guessed it – PKZIP 2.0, which is very unlikely to make an appearance on the Amiga.

ZIp and UnZip can be found in the archives Amyzip92.lzh and Unzip41.lzh on all good bulletin boards. And a few bad ones, too.

● Stewart C Russell can be contacted on CiX as scruss (that's scruss@cix.compulink.co.uk), or is available at FidoNet 2:259/2.4 (off Alba Maximus, Glasgow).

Amiga comms – the story so far

The Amiga comms scene is really moving quickly. A couple of years back very few people knew what a Fidonet Mail Point was – offline mail readers were rare, and Usenet was unknown outside universities. But now, all these things are widely used due to the incredible enthusiasm of Amiga comms people.

Amiga comms software is some of the best there is. Sure, it doesn't have all those cryptic IBM protocols used in big business, but the Amiga isn't for that – it's a computer with its hair down. But what other machine can multitask and exchange data between programs without spending a fortune on expensive commercial software?

Look at all the best Amiga comms software – NComm, JR-Comm, TrapDoor, Point Manager to name but a few. It's all Shareware, and all very inexpensive too. The most expensive of these is only £25 – the cost of one game. The big two terminals (NComm & JR-Comm) are certainly up for revision this year. High on the agenda for both of them is ARexx support, allowing your comms program to control just about any other external program.

Software for Fidonet is getting better too. TrapDoor 1.80 in conjunction with Point Manager 3.00 makes setting up a point very simple. And even the mighty CiX is about to get its first easy-to-use, mouse-controlled OLR software, NICOLA. The existing software (Amiga.Query) works well, but is not tremendously friendly or straightforward.

Modems are coming down in price, too. With the standardisation of modems across Europe, the old "BT-approved" price hike will fade away. Even now, new v22bis modems can be had for under £100 if you know where to look, and 2,400 baud is pretty much the minimum you need these days. The future is certainly looking bright...

Speedy but sensitive

AMAL can be used within AMOS to create impressive results. Peter Hickman looks at this powerful sub-language

Those of you who follow this page every month will know that over the past six issues we have looked at how to write a basic game using simple (almost generic) programming techniques. Now it's time to really break free and attempt a task using something really meaty (or soya-beanie if you are vegetarian) – AMAL.

We have covered AMAL previously, but not to write a whole game. Over the next couple of issues I will be showing you how to get the most out of this sub-language and more importantly how to use it in conjunction with the other (less powerful) parts of AMOS.

You will notice that I have referred to AMAL as a sub-language. This is because it is a separate part of AMOS and is quite capable of existing by itself. In many respects AMAL is similar to assembly language, especially in its use of mnemonics to represent the commands we use to create an AMAL program, and like assembly language, it must be well structured in order to keep track of any tasks we may ask of it.

To control AMAL we use a series of Channels – 16 in all. These can be assigned to control a single AMAL mini-program which will run alongside your main AMOS program. Let's look at a way of using of AMAL. First we set up an AMAL channel using a command like this:

```
Channel 1 To Screen Display 0
```

This would prepare your channel to accept an AMAL program. Now we will tell AMAL to feed the mouse co-ordinates into the external registers RA and RB, after which we will read and display them onscreen.

One thing to remember about AMAL is that you must type it exactly otherwise errors can occur quite easily. This is due to the fact that AMAL is case sensitive – that is, it can tell the difference between upper and lower case letters:

```
mal 1,"Start: Let RA=XM ; Let RB=YM ; Jump Start ; "
Amal On 1
Repeat
   Print At(0,0);Amreg(0);"  ";
   Print At(0,1);Amreg(1);"  ";
Until False
```

AMAL registers are like ordinary variables in AMOS itself, and can be used to store numbers for calculations or later use. There are two types of AMAL register, internal and external. The internal registers are labelled R0 to R9 and are mainly used for temporary storage of values within an AMAL program. The external registers are labelled RA to RZ and are (or at least should be) used for communicating with the outside world.



Amosteroids, which comes with AMOS...

Reading these registers from your main AMOS program is simple – we just use the AMREG() command (see your AMOS manual for a fuller explanation of AMREG). Incidentally, you can store values in the AMAL registers from your main AMOS program once again using the AMREG() command.

Being a fully featured sub-language means that AMAL programs can be quite long. For this reason AMAL allows you to structure commands within strings. I know it sounds a little weird but you do get used to it – trust me!

In the previous example we saw how to create a simple loop jumping from the end of the string back to the label "Start:". Labels used for structuring AMAL programs are all single letters of the alphabet, in upper case. Because AMAL ignores all lower case letters you can pad out the label to create something a little more meaningful.

The next example is made up of many smaller strings "glued" together to create a single long string. You don't really want to know this but joining two or more strings together is known as concatenation:

```
Channel 0 To Screen Display 0
A$="   Start:"
A$=A$+"        Pause ; "
A$=A$+"        Let Y=YM-100 ; "
A$=A$+"        If XM-160<64 Jump Start ; "
A$=A$+"        Let X=XM-160 ; "
A$=A$+"Jump Start ; "
Amal 0,A$
Amal On 0
```

This program will work in direct mode and will allow you to move the default screen around with the mouse. It's a little like the larger program which appeared last month.

Notice the way I have put each command on a separate line. I have also padded out the short labels and commands with lower case letters so that should I come back to the program in a couple of months I will be able to work out what it does quite easily.

AMAL also allows you to execute a simple form of FOR...NEXT loop, the main difference between the AMAL version and the actual AMOS version of the loop is that you cannot perform STEPs (if you are unsure what a STEP is, check your AMOS manual). The following example does the same job as the previous program, but only for a limited amount of times:

```
Channel 0 To Screen Display 0
A$="   For R0=1 To 80 ; "
A$=A$+"Start: "
A$=A$+"        Pause ; "
A$=A$+"        Let Y=YM-100 ; "
A$=A$+"        If XM-160<64 Jump Start ; "
A$=A$+"        Let X=XM-160 ; "
A$=A$+"Next R0 ; "
Amal 0,A$
Amal On 0
```



If you look at the Amosteroids game which came with AMOS you will see that most of the work is done by AMAL – it controls the starship and asteroids. In fact the only things AMOS has to do is play the samples and update the score during the game.

These AMAL programs need not be limited to controlling aliens in Xenon MXXIIX – how about using them to make bobs to follow your mouse? Or making constant calculations and feeding them into your main program using the AMAL registers?

● *Next time we will get down to the juicy task of constructing a Pacman-type game using a hybrid of AMAL and AMOS.*



...is, in actual fact, written almost completely in AMAL

Fancy some fonts?

Ben Pointer looks at some inexpensive outline fonts for PageStream 2.1

Something that can hold back creativity while publishing from the desktop is a lack of good quality outline fonts.

Professional Page 2.1, for example, comes with just two, Times and Triumvirate, and while these are admittedly enough to create anything from simple documents to complete newsletters or magazines, it can be a tricky business making a heading or page stand out from everything else.

PageStream 2.1 comes with a larger collection of outline fonts – 18 in all – but the problem is that the font you use has more impact if it goes with the words that are published in that font. To give a silly and extreme example, the word "cold" would look silly in a fancy font that had flames licking around the edges of it.

Most professional desktop publishers will have thousands upon thousands of fonts sitting on a hard drive. Some may never get used, others may get used only once in a blue moon, but a desktop publisher without a large collection of fonts feels like an artist without brushes.

Not cheap

The trouble is that fonts aren't cheap. It's not uncommon to have to pay £100 for a single commercial font for a PC or Macintosh – commercial Amiga outline fonts happily cost less, but are still about £35 each.

There are thousands of public domain and shareware outline fonts for the Macintosh, but very few for the Amiga. One collection that represents excellent value for money comes from George Thompson Services and is specifically aimed at PageStream 2.1 users.

The set comprises about 60 fonts on five disks, costing £9.99 for the lot, which works out at less than 17p per font.

The fonts are provided in Adobe Type-1 format and can be output to both dot matrix and PostScript printers. Almost all of them were originally Macintosh format – they were ported onto Amiga disks using AMAX-II and then converted to Adobe Type-1 fonts using utilities that come with PageStream 2.1.

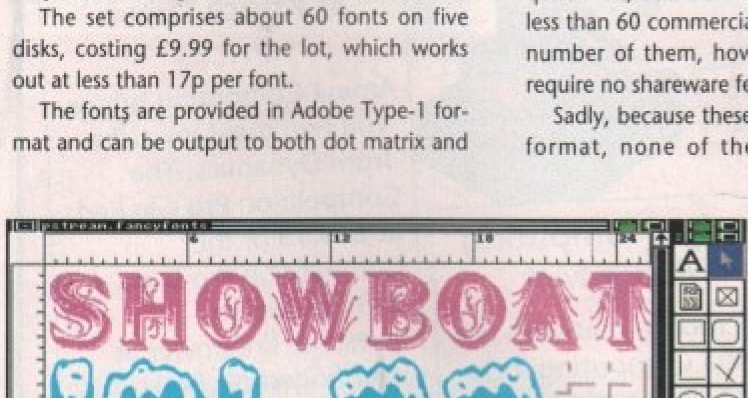
Most of them are "fancy" fonts, the kind of thing you'd use for headings and display, but there are one or two, like TempoFont and Albatross, that could be used for main body text. A few of the fonts have no lower case letters, because that is the way they have been designed.

Almost all are shareware and contain Readme files suggesting that you send in a shareware fee should you wish to use and keep the font. The average fee is about $20, so if you registered the lot it could set you back quite a bit, but even this kind of money is a lot less than 60 commercial fonts would cost. A fair number of them, however, are freeware and require no shareware fee.

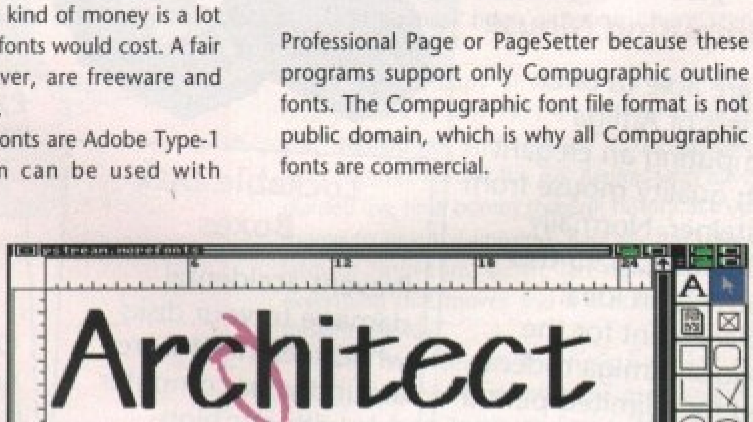
Sadly, because these fonts are Adobe Type-1 format, none of them can be used with Professional Page or PageSetter because these programs support only Compugraphic outline fonts. The Compugraphic font file format is not public domain, which is why all Compugraphic fonts are commercial.



George Thompson Services' shareware PageStream 2.1 fonts ... at about 17p per font, you can't go wrong



The PageStream 2.1 Fonts collection includes a good selection of fancy fonts for special occasions



Although strictly PostScript fonts, PageStream 2.1 will output all the fonts in the collection to dot matrix printers at the highest resolution possible

Karaoke capers

CDTV could soon be adding a new dimension to that Friday night singalong down the local, as Jolyon Ralph reports

I have now had a chance to test the CDTV Genlock which I mentioned in the last issue. The card, which fits in the CDTV video slot, features composite video in (to connect your incoming video signal), composite video out (to display or record) and a super-VHS output (to connect to the new generation of SVHS videos and televisions).

The card is very compact and professionally made, as you would expect from Commodore. The picture quality is excellent, especially as you can display the genlocked output via a standard Amiga monitor connected to the 23-way video port (unlike most cheap genlocks, which can only be viewed in composite video).

One problem with the genlock is that when it is fitted, the Amiga display defaults to interlace mode, so when using most CDTV discs you will want to go into preferences and disable interlace first.

Switchable

The genlock is software-switchable, and can be controlled by pressing the Genlock button on the CDTV infra red remote control. Although there are few applications that support the CDTV Genlock at the moment there are several under development, and Video Karaoke systems, where you see yourself singing along to backing tracks, are just around the corner. The CDTV Genlock costs £149 and is available from all CDTV stockists.

While on the subject of cards, I have a lovely little SCSI interface sitting in my CDTV. It is a Commodore card made only for developers. Commodore have not decided whether to issue this card to the public – they think there will not be a demand for it. So if you think you want a SCSI port on your CDTV, write to Commodore and tell them!



The CDTV version of Xenon II is anything but another piece of "shovelware"

Just before Christmas, Mirrorsoft finally got around to launching Xenon II and Falcon for CDTV. Both of these (particularly Falcon) have been heavily rewritten to take advantage of CDTV, and are not just "shovelware" (standard Amiga games put straight onto a CD without enhancement, like Lemmings). Since Mirrorsoft was closed down very soon after the release it may be difficult to get hold of these titles, although I have seen Xenon II on sale.

Luckily the copy of Xenon II I originally ordered back in May 1991 arrived. For those of you who do not know Xenon II, the general story revolves around the evil Xenites who have planted five time bombs through history. It's up to you to save the universe. Basically this translates to "move up, down, left right, shoot at everything that moves and if it doesn't move, shoot it anyway".

If you have played the Amiga version of Xenon II you will remember the great soundtrack based on Bomb the Bass's "Megablast" track. This tune has now been replaced by one of six remixes of this track played directly from the CD, and the disk also contains other tracks from them as well as S'Xpress, Betty Boo and Baby Ford.

The first of the audio tracks is mixed in the new Roland Sound Space system which gives 3D sound from a standard hi-fi. Can't say I notice any difference myself.

Xenon II for the CDTV is slickly put together and works well. At £39.95, it's a great shoot-'em-up, with superb music. Highly recommended.

Multimedia Newsline

Controller redesigned

The CDTV infra red controller has been redesigned. One of the main criticisms was that you have no obvious way of telling whether the controller is in joystick or mouse mode, and under joystick mode half of the keys do not function.

Now the new controller, being shipped with new CDTVs, has a sliding switch for mouse/joystick mode, and the keys work in both modes. It's good to know that Commodore are taking notice of customer feedback.

Warner launch

Warner New Media are launching a new range of CD+G discs which are compatible with the CDTV. CD+G (or Compact Disc Plus Graphics), if you haven't already come across it, is a standard music CD that has simple graphics encoded onto spare areas on the disc which are used on the CDTV (and other CD+G compatible machines) to display graphics in time to the music.

This has already had considerable use with Karaoke discs. The Warner New Media series initially contains classical music works with background text and graphics explaining the history and musical significance of the works. It is certainly more interesting than some of the earlier CD+G discs, which just seemed to be random picture slideshows along with the music.

Name change?

Rumours abound that the Amiga A690 may undergo a name change before launch, as Commodore wants to keep hold of the A6xx numbers for future use (possibly for a new A600 computer?). More news next month – unless the *Amiga Computing* news pages beats me to it!

OFFER A

3 FREE GAMES

Not just one, but three classic games from Infogrames when you subscribe to *Amiga Computing* – The Light Corridor, Murders in Space and Mystical



OFFER B

GRAVIS JOYSTICK

This "Rolls-Royce" of joysticks is available in black. It features an 8-position tension control, foam padded grip, six-foot connector cable and microswitched fire buttons



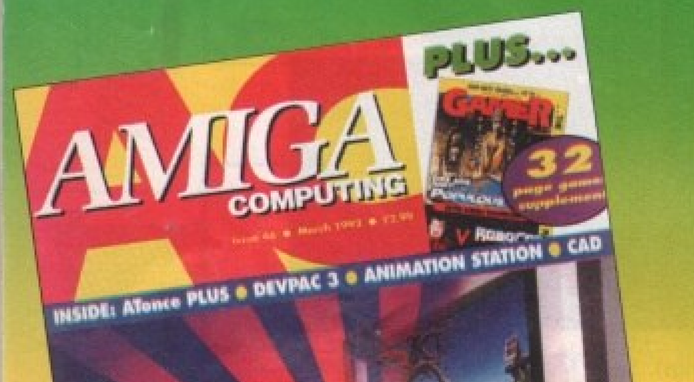
OFFER C

MERCENARY III

Experience the ultimate in space crusading with the block busting Mercenary III from Novogen. *Amiga Gamer* describes the sure-fire hit as "Captivating, intriguing and easy to get into".
It normally costs £29.99 but you can get it free by subscribing today!



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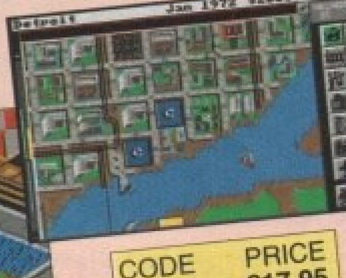
SIM CITY/POPULOUS



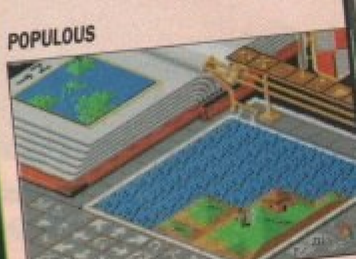
Two of the best selling pieces of software are now available in one package.

With Sim City you take the destiny of the world's greatest cities or the city of your dreams in hand. Build factories, houses, airports... Fight crime and pollution... Everything is animated and managed in real time; every decision affects your citizens' life: will you prove to be a good Mayor?

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SIM CITY



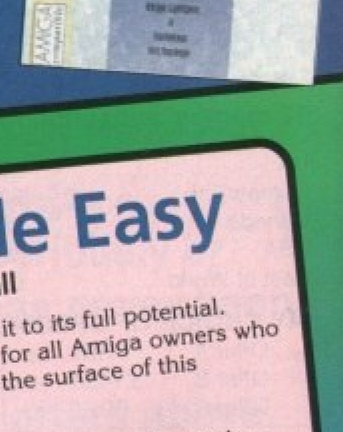
POPULOUS

CODE 9868 PRICE £17.95

Attention All Designers!
Trojan Lightpen

The Trojan Amiga compatible lightpen can be used as a complete replacement for the mouse in many applications. Particularly useful in drawing and design, the two button pen provides the user with a very direct method of control.

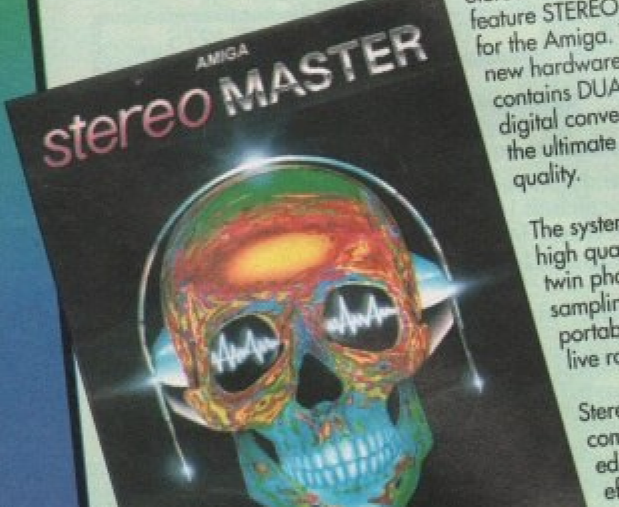
This package also includes KWIKDRAW - a lightpen compatible drawing program, plus a lightpen driver that allows the pen to be used with most programs that run from Amiga Workbench. The lightpen is also compatible with: *DPaint III and IV, Photon Paint, Workbench 1.2/1.3, Battlechess, Professional Page, Music-X and Audiomaster V2.*



Easy to use, the Trojan lightpen will have you producing designs and drawings that are far superior to those produced using a mouse.

CODE 9870 PRICE £34.95

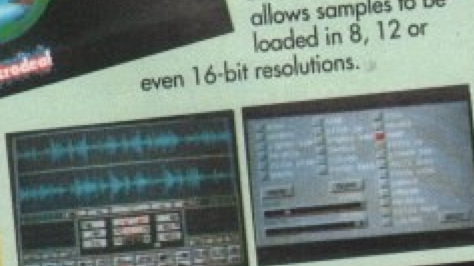
PLAY IT AGAIN WITH STEREO MASTER!



Stereo Master is the latest full feature STEREO sound sampler for the Amiga. This completely new hardware cartridge contains DUAL analogue to digital convertors, ensuring the ultimate in 8-bit sample quality.

The system can record in high quality stereo from its twin phono input sockets, sampling anything from a portable CD player to live radio!

Stereo Master comes complete with powerful editing and special effects software which allows samples to be loaded in 8, 12 or even 16-bit resolutions.



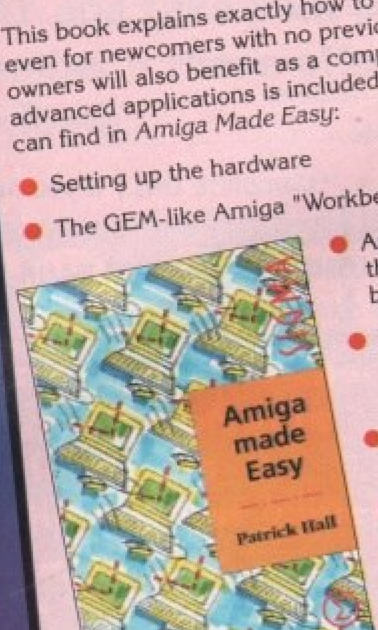
CODE 9814 PRICE £34.95

Amiga Made Easy
by Patrick Hall

Make the most of your Amiga and use it to its full potential. *Amiga Made Easy* is essential reading for all Amiga owners who are struggling to do more than scrape the surface of this machine's many capabilities.

This book explains exactly how to use the Amiga effectively – even for newcomers with no previous experience. Existing owners will also benefit as a comprehensive guide to more advanced applications is included. Here a sample of what you can find in *Amiga Made Easy*:

- Setting up the hardware
- The GEM-like Amiga "Workbench" graphic environment
- Applications software (including the "best" games and Amiga business software)
- Programming the Amiga, complete with joystick and window control
- Amiga graphics and mouse programming
- Artificial intelligence and machine learning



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BARGAIN OFFERS

The WORKSTATION is here!

It's no secret that the Amiga is the most powerful home computer of them all. What has remained a mystery for most newcomers is how to make the most of its immense potential. Now **Amiga Computing** has produced a floppy disk that is packed with everything you need to take the hassle out of harnessing the inbuilt power of your Amiga.

Many months of research and testing have resulted in a **simple-to-use**, single disk replacement for Commodore's Workbench which we're calling The WorkStation.

This indispensable collection of utilities, including some outstanding shareware never before assembled together on one disk, is now available for just £3.50.

It's too good to miss!

Aspiring artists: Here's the package you've been waiting for! Using nothing more than your trusty mouse you can now freeze and store any Amiga screen that runs under Workbench. Grab screens from your favourite PD game and "edit" those high scores using any popular paint package.

Got a faulty floppy? When vital disks get damaged, you'll now have the chance to try the seemingly impossible mission of recovering all your work. Workbench's geriatric DiskDoctor can be sent into retirement by this super utility!

Putting print to paper? The WorkStation disk includes a superb text editor. This powerful package has an unashamedly no-frills approach to producing and formatting professional looking text that would be envied by many of the more expensive commercial products.

The ability to design custom icons as standard is virtually unique to computers in the Amiga's class. The WorkStation turns your Amiga into a comprehensive design studio, providing a wide range of graphic tools that can make icon creation child's play.

The WorkStation has a fully configured dynamic recoverable ram drive which acts like an extra invisible drive to your Amiga. It's a vast improvement on the standard Amiga drive because it is very flexible and goes easy on memory.

Heart of The WorkStation is a powerful shareware package called SID. When you use it you can say goodbye to faceless blank screens and complex commands. Instead your mouse takes full control. Fiddle with files, display text and graphics, sample sounds, uncrunch archives... all this and more with just a click of a mouse button.

CODE 9958 PRICE £3.50

WHY LET YOUR FINANCES BE A WORRY?

Personal Finance Manager

FOR THE AMIGA

Personal Finance Manager provides an easy way of looking after your bank account, building society account, credit cards and so on. Its WORKBENCH interface allows transactions to be entered or altered as easily as filling out a form

Full mouse control of PFM's window environment means a really user friendly program. PFM for the Amiga appears and runs exactly the same as our top selling PFM program for the Atari ST.

Automatic Standing Orders means that regular payments are never forgotten, whilst the graphic display will help you manage your account more effectively. Personal Finance Manager will even attempt to match your statements by automatically identifying transactions that haven't yet been cleared.

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- *Full Workbench interface*
- *Account entries are automatically placed in date order*
- *Selectable date formats*
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- *Auto balancing against statement*
- *Graphic analysis including: Balance plot Budget comparison. Spend pie charts*
- *Windows are moveable and re-sizeable*
- *Graphics are self-scaling to fit windows*
- *All windows can be displayed at the same time*
- *Account print option*
- *Full multi tasking – allows multiple account access*

MichTron®

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Computer Animation From Video With –

Take 2 From Rombo

Take 2 is a must for computer artists and enthusiasts of any age. It will cater for both amateur and professional applications and help you get the most out of your Amiga. It can be used for the following applications:

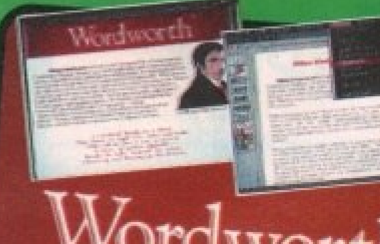
- *Traditional animation*
- *Storyboards*
- *Product presentations*
- *Home line tester*
- *Cartoon productions, both visual and sound*

Take 2 is compatible with any Amiga and supports any image from two shade mono to 4096 colour Ham mode. Load and save IFF images or D.Paint Animations. It includes up to four levels of animation and channels of sound and many other useful features.



With Take 2 you can become your own animator in your own home.

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Wordworth

a writer's dream

v1·1

WORDWORTH is probably the best value word processor available for your Amiga. Written by UK Company Digita (which means using The English Collins based spell checker and thesaurus) it has all the features of more expensive packages:-

- Human Interface Protocol making operation simple and pleasurable
- WYSIWYG display taking advantage of the Amiga's graphic capability
- Incorporate and manipulate external pictures from D Paint for example
- Mix and match enhanced fonts and symbols, Amiga fonts, colourfonts and your printer's fonts. Postscript compatible
- Mailmerge facilities

DIGITA INTERNATIONAL

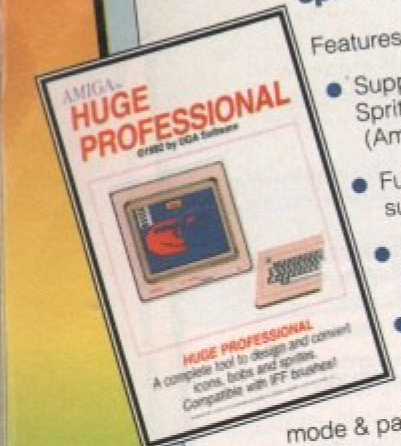
Dreams become reality with WORDWORTH

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A complete program for producing icons sprites, brushes and bobs.



Features:

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- Icon editor built in, enabling full icon properties modification
- Functional & user friendly interface, keyboard shortcuts
- Complete user control over display mode & palette
- Advanced drawing capabilities, including 6 drawing tools, flood fill & basic dithering technique
- Font support, palette control & source code palette IO
- Bitmap editor capabilities, including cut/paste, mirror & rotator and 2 pages for drawing
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Why use several utilities if one program can do it all?

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POWERPACKER PROFESSIONAL v4.0

You can't pump up a disk, but with **POWERPACKER** you can compress its contents into less than two-thirds of the space otherwise required for storage - on a floppy disc or hard drive.

POWERPACKER uses sophisticated "crunching" algorithms to reduce the sizes of files, allowing and average of 40% more material to be stored on the medium of your choice.

POWERPACKed programs load, "auto-decrunch" and run.

POWERPACKER includes several freely distributable utilities which access packed files at the click of an icon, so you can get full and quick use of them without decrunching:

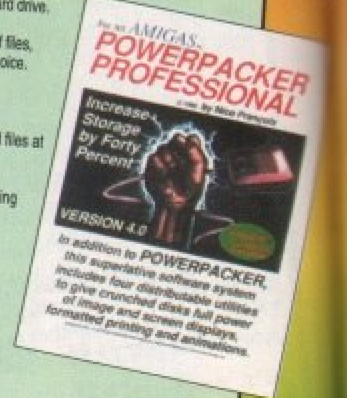
PPMORE A fully-pledged screen text reader with options for string search and sending an on-screen image to a graphics printer.

PPANIM Plays a crunched anim file. Tremendous savings possible for storing and playing your animations.

PPTYPE Formats a crunched text file to the printer, including pagination and perforation skips.

Plus **DECRUNCH**, a utility that restores files to original sizes.

POWERPACKER PROFESSIONAL © 1990 By Nico François



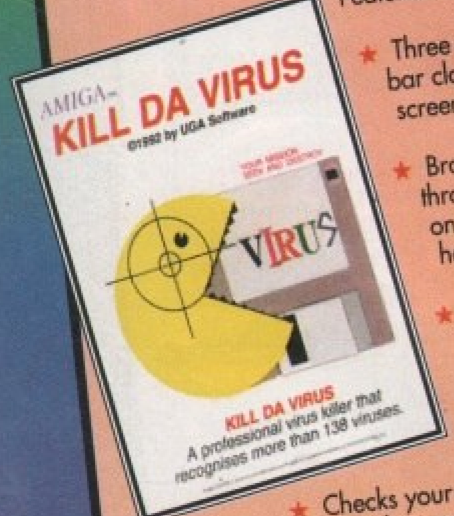
Features:

- **Make your files 70% smaller!** Crunch (compact) executable/datafiles and make your files to 70% smaller. With the help of the PPloadseg utility, which you can install on your (hard) disk, you now can even crunch libraries and devices.
- **Extra Powerpacker utilities**
  PPmore >> Displays packed ascii files
  PPshow >> Displays packed IFF pictures
  PPanim >> Displays packed animations
- **Comes with 2 new libraries.** Powerpacker and a new requester library with even more features and better menus.
- **Crunchfactor even better than version 3.0b**
- **Detects Data or Command files.**
- **Full Arexx Support.**
- **Improved Menus and Colour Table**
- **Special Kickstart 2.0 version Included**

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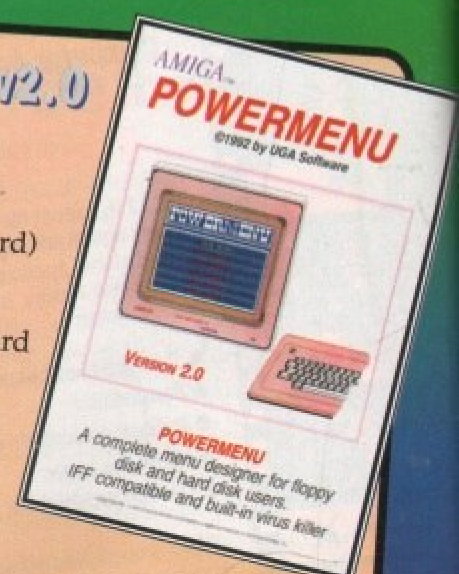


Features:

- Three versions included from a title bar clock version through a custom screen 3D gadget version (KDV5).
- Brainfile which is being updated through PD channels and of course on Newsflash so you will always have an updated version.
- Store your bootblocks on disk so you can restore them when your bootblock is destroyed by a nasty boot virus (Saddam etc etc).
- Checks your memory and will kill any live virus to avoid further spreading on healthy disks. Any unknown bootblock will be analysed with a 'learn' option so next time it can be identified.
- Userfriendly menus so easy to work with.
- Full support of Kickstart 2.0 and hard disks.

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POWERMENU v2.0



Features:

- Userfriendly utility to produce your own (hard) disk menu's
- Ideal for floppy and hard disk users
- Full support of mouse, joystick and keyboard
- Multitasking
- IFF picture (background pictures) and Amiga font support
- Big Agnus support
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AMC 4



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Can you guess which mag this is a parody of?

You can win a six month subscription to *AC* if you guess correctly and make it out of the hat.

Send entries to: Mystery Mag, Lobster 47, Amiga ~~Power~~ Computing, Europa House, Adlington, MACCLESFIELD, SK10 4NP

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It's 3.15 am and *AC* is finished for another month – boing boing etc...

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ADVERTISERS' INDEX

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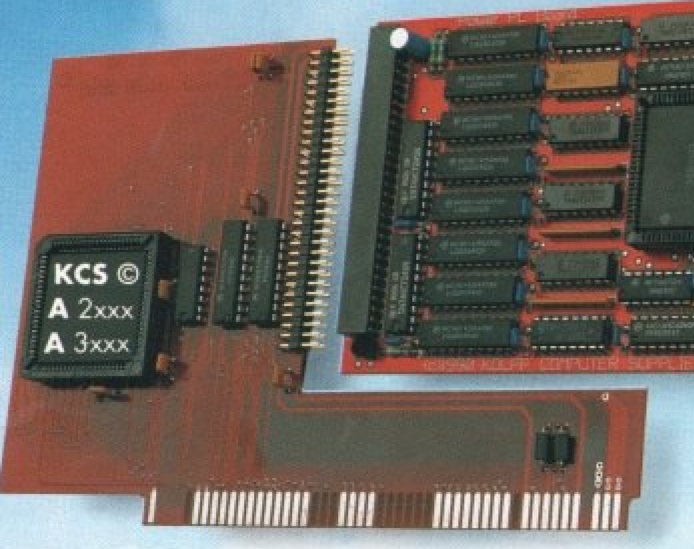
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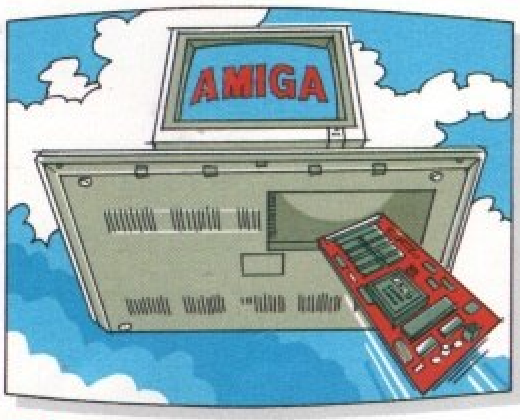
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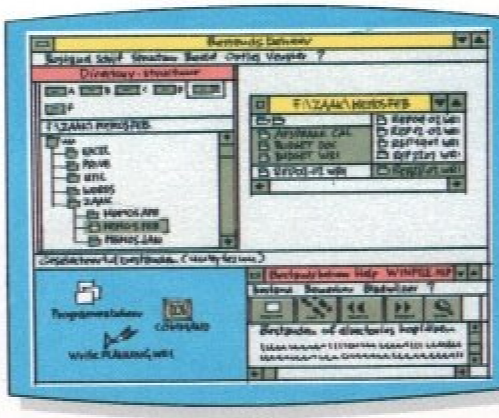


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VISA

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